

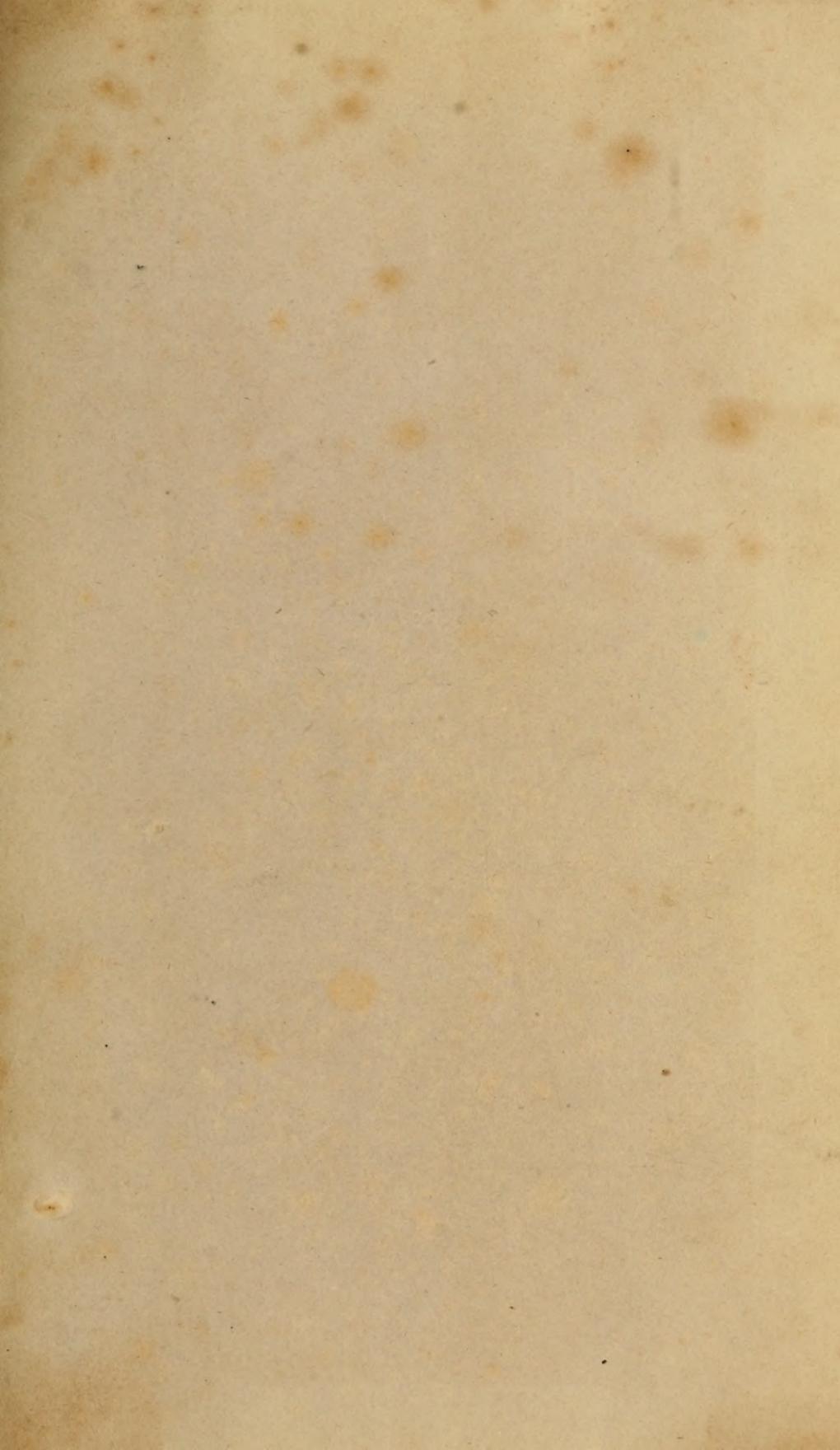
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ILLUSTRATIONS

OF

BRITISH ORNITHOLOGY.

BY

PRIDEAUX JOHN SELBY, Esq.^c

FELLOW OF THE ROYAL SOCIETY OF EDINBURGH; FELLOW OF THE
LINNEAN SOCIETY; AND MEMBER OF THE WERNERIAN
NATURAL HISTORY SOCIETY, &c.

VOL. I.

LAND BIRDS.

(2 vols. of Plates - huge folio to accompany)

EDINBURGH :

PRINTED FOR THE PROPRIETOR, AND PUBLISHED BY
W. H. LIZARS, EDINBURGH;
LONGMAN, REES, ORME, BROWN, GREEN AND LONGMAN,
LONDON; AND W. CURRY JUN. & CO. DUBLIN.

MDCCXXXIII.

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PRINTED BY NEILL & CO. OLD FISHMARKET.

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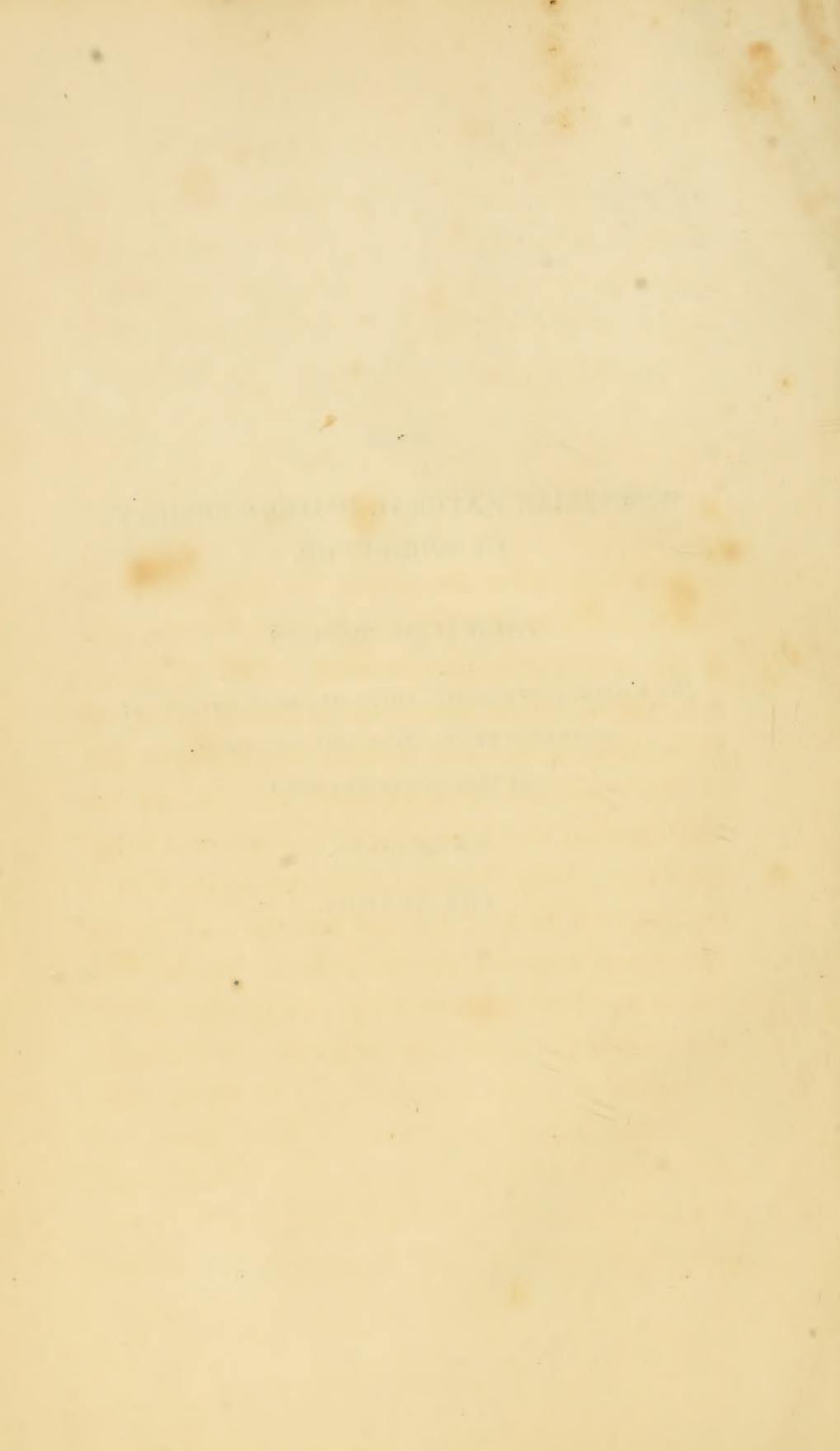
WERNERIAN NATURAL HISTORY SOCIETY
OF EDINBURGH,

THESE ILLUSTRATIONS

(ON A BRANCH OF SCIENCE WHICH HAS BEEN EMINENTLY
PROMOTED BY THE ZEAL AND ABILITY OF
SEVERAL OF ITS MEMBERS)

ARE INSCRIBED BY

THE AUTHOR.



P R E F A C E

TO THE FIRST EDITION.

I CANNOT allow the present volume to meet the public eye, without offering a few remarks upon the design and execution of this work. The etchings do not pretend to any merit beyond that of fidelity of delineation, upon a scale hitherto unattempted, and to that spirit and character which will generally attend drawings made, as much as possible, from living specimens. With respect to the letter-press, I have not professed to give a *complete history of British Birds*, and have not, therefore, drawn together into one focus all that has been better said by other writers upon the subject ; but have contented myself with referring, by occasional notes, to any anecdotes particularly interesting as to the species under consideration. The present work bears the title only of *Illustrations*, and, as such, I was chiefly anxious to clear the systematic arrangement of such discrepancies as still exist-

ed ; to condense the species, by excluding such enlargements as had arisen from a want of strict attention to the changes of plumage under different periods of age ; and to add to the general stock of knowledge my mite of personal observation on the habits of this interesting tribe of creatures.

In this latter respect, I trust candid readers will not charge against me as a fault the large share of egotism that seems to pervade this volume ; of two evils, I certainly would rather chuse to rest under this imputation, than that of being a downright compiler. As to the style, I have endeavoured, as far as lay in my power, to unite conciseness and perspicuity with that plain didactic manner in which I conceive all works on scientific subjects should be written.

I shall conclude this short notice, with apologising for a slight want of regularity in the numbering of the plates. This was most unavoidable from the necessarily irregular manner in which the specimens were obtained, and the etchings accomplished ; but I should hope that no great inconvenience will be experienced on this point.

February 10. 1825.

P R E F A C E

TO THE SECOND EDITION.

THE Author cannot permit a Second Edition of his First Volume (together with the completion of his Work in a Second Volume) to issue from the Press, without congratulating his readers and the scientific world at large, upon the great degree of attention and minute accuracy of investigation which have been extended to the present branch of Natural History since his labours commenced. No trouble has been spared on his part, not only in elucidating the subjects of his second volume to the best of his ability, but in solving such doubts, and reconciling such discrepancies, as were unavoidably left in the former portion of his work ; and he trusts that, having rejected the former arrangement of M. TEMMINCK, and adopted now, through both volumes, that lately proposed by Mr VIGORS (and since followed by many eminent naturalists), will have materially contributed to that end. This resolution

was taken upon his most perfect conviction that the last mentioned plan of Classification is more in accordance with that *natural Order*, under which, it must be convincingly evident to those who will at all study the subject, the works of the Almighty Creator are offered to our view.

The Author trusts that these two volumes may (under their present plan) be not merely regarded as elucidatory of the accompanying Plates, but may claim the higher title to public attention, as a compact and systematic Manual of British Ornithology; and that his work may become useful, both from its portable size, and from the readiness of reference it will afford to the student in this interesting department of science.

February 28. 1833.

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INTRODUCTION.

IT would be inconsistent with the projected plan of the present work, in which the Plates are intended to form the prominent feature, to enter into a discussion upon the peculiar adaptation of the several organs of the feathered tribe to the modes of life to which they have been ordained by an all-wise Creator; to exhibit, in the course of such discussion, a minute display of their anatomical structure; or to endeavour after explanations of the different and wonderful phenomena that this race of creatures occasionally present (further than I may hereafter touch upon under each description), especially as there are already before the public so many excellent works entering diffusely and deeply into such points. These works are open to all who feel interested in the study of this pleasing branch of Natural History; and it may therefore be sufficient for me to point out such only as appear more particularly illustrative of the several heads above mentioned.

With respect to Organic Structure, both external and internal, and the necessary adaptation of its several parts to peculiar habits of life, I would recommend an attentive per-

usal of the works of CUVIER (especially his “*Regne Animal*”), those of BUFFON, and the “*Philosophy of Zoology*” of Dr FLEMING, as well as the writings of Messrs VIGORS and SWAINSON; in all of which these general heads of the science are most ably discussed. DERHAM’S “*Physico-Theology*,” and the “*Natural Theology*” of the late learned Dr PALEY, are books almost too well known to need recommendation, but follow the others in such natural progression, by leading the mind to a deeper and more salutary interest in this branch of science, that they ought not to be omitted.

The above works are *first* mentioned, as applying to the subject before us in its most enlarged scale; but, with regard to the minor, and, I may add, more superficial points, there are many works upon general Ornithology, as well as upon that of our own islands, which I would particularly recommend. Dr LATHAM’S “*General Synopsis*,” and “*Index Ornithologicus*;” the “*Ornithological Dictionary*” and “*Supplement of MONTAGU*;” the “*Manuel d’Ornithologie*” of M. TEMMINCK; the Ornithological works of BRISSON, LE VAILLANT, VIEILLOT, LESSON, &c., with those of the German writers MEYER, BECHSTEIN, and ILLIGER, will be found of eminent utility. For an instructive individual history of each species, the “*Ornithology*” of WILLOUGHBY, WHITE’S “*Natural History of Selbourne*,” the works of PENNANT, LEWIN’S “*British Birds*,” and the “*British Birds*” of BEWICK, well repay perusal. There are also some excellent independent treatises upon generic distinction, variation of plumage, and peculiar specific habits, dispersed through the various Scientific Journals, and Transactions

of the Philosophical Societies of the present day. The copious list of Synonyms that will be found attached to each species, may also be regarded in the light of a table of references to other works, which it would be therefore needless to mention.

Such remarks as appeared strictly necessary to the elucidation of the several orders and genera, have been given under the characters of each, as they occurred in the course of classification, as being explanatory of the grounds upon which such general distinctions have been established.

The recent more rapid progress of this science towards maturity, may be, in a very great degree, attributed to the attention paid by some of the later ornithologists to a point which had been before almost totally neglected, viz. the changes of plumage that the feathered tribe undergo in their progress from the young to the adult state, as well as those of a more peculiar and partial nature that are experienced at a certain season of the year, sometimes by both sexes, but more commonly only by the male bird. No opportunity has been omitted by the present writer to verify (and frequently from the progress of experimental observation) many of the changes recorded by TEMMINCK, MONTAGU, and others; and, in order to their elucidation, figures are given of some species at different ages, and at different seasons, which will be more apparent in the second part of this work, as these changes chiefly exist, and are most striking, in the water birds; and have accordingly been more confusing in their consequences. A separate

figure also has been given wherever a very marked difference exists between the two sexes ; and where this measure has not been adopted with respect to the variations incident to season, they have still been studiously pointed out in the description of the species.

In the course of the descriptions, the terms *vernal* (or spring) and *autumnal* (or general) moult frequently occur ; which it appears necessary to explain. By the Autumnal Moult is meant that entire annual change of plumage to which all birds are liable, and which usually takes place at this time of the year, or after the production of the species*. The term Vernal Moult is used to signify the partial change of feather that particular species undergo, and that takes place on the approach of the pairing season ; which livery, as it were, remains only during that period. The moult is styled *double* in such species as are subject to the above-mentioned change.

In some cases, the male bird particularly is liable, though not to an actual change of feather, yet to a considerable variation either in colour or brilliancy of hue on certain parts of the plumage, at the foregoing season. This variation has been attributed by TEMMINCK to the action of the air, and a gradual wearing away of the edges of the feathers ; but I am sorry to be compelled, from the result of long continued observation, to dissent from the opinion of so eminent a naturalist. I am induced to consider the plumage to be so far an actual part of the living bird, as to be under the in-

* In the Swallow tribe, and some few others, it happens at a later period, or during the months of January or February.

fluence of such constitutional change as the bird may at any time experience, and such a change is strongly demonstrated at the season of pairing; witness its effects in the high degree of spirit frequently demonstrated, and in the superior song generally called forth at this particular period. That there is an invisible circulating fluid pervading the feather, appears from the striking difference in elasticity and brilliancy of colour between the feather upon a bird whilst alive, and upon the same bird in but a short time after death. In water-birds, this principle of life in the feather (if I may be allowed the expression), is singularly apparent; as the plumage that is impervious to water upon the living bird, is almost immediately after death subject to its effect. There can be no reason, then, why the feather may not be influenced by the constitutional state of the bird, and as that is in its highest degree of vigour immediately previous to the season of propagation, why may not such vigour be exhibited to the very extreme points of the circulating medium, by a partial variation of colour, or an increased lustre of tone in the former hue of the feather? It is not fanciful, for it has been established as a maxim in Pathology, that the state of health may, in man, be ascertained by the occasional flaccidity or crispness of the hair; and have we not repeatedly met with well authenticated instances of great and sudden changes having taken place in its colour, under strong mental affections, acting only, of course, through the organic structure of the body?

Changes of colour in the hair of many animals are seen, and that also at particular seasons; and (as Dr FLEMING

asserts, in the case of the stoat, and some others, that assume a winter's garb) without any actual shedding of their coat, either upon the first variation, or in regaining their summer's hue. It is possible, and there is now some reason for believing, that the edges only of the feather may be shed (but not by a *gradual* process), thus presenting a newer and brighter surface, either of the same, or, more frequently, of a different shade of colour. In the birds in which this partial change happens, it may even be observed, that, where the feather, as on the head of the Chaffinch, Reed-Bunting, and Stone-Chat, is of two distinct hues, the webs of the exterior one are joined to the main body of the feather by a line of separation of finer texture, thus forming an adscititious margin, as it were, to the inner part.

In the course of the descriptions of each species, the terms *Summer* and *Winter Visitant*, and *Polar* and *Equatorial Migrant*, will frequently occur, which, to general readers, may seem to require explanation. This I will, as briefly as possible, attempt. The Summer Visitant, or Polar Migrant, implies a bird resident, during the summer season, in these kingdoms, as being included in the northernmost parallel of latitude to which its migration extends, from the Equator towards the Pole*. To the Winter Visitant, or Equatorial Migrant, these kingdoms are in the southernmost parallel to which their winter's migration reaches, in course from the Pole to the Equator, their sum-

* Such are many of the *Sylviadæ*; also the *Cuckoo*, *Night-Jar*, *Swallows*, &c.

mer being passed in higher and colder regions *. The term *Occasional Visitant*, when used, denotes a bird found here only at uncertain, and often distant intervals †, and will frequently apply to stragglers, that have been driven by tempest, or other casualties, out of their regular course of migration, either from more southern countries than our own to northern regions, or the reverse.

Migration is an instinctive rule of action stamped upon the animal world (but more particularly displayed in the feathered race, from their superior ability of locomotion), by the general and provident Laws of Nature, and which has long engaged the attention of the speculative naturalist; but, without perhaps the possibility of coming to any conclusion upon the causes of such migration. Dr FLEMING, in the work before mentioned, clearly demonstrates, that a great latitudinal movement from the Equator toward the Poles takes place amongst the feathered tribe, on the approach of spring, or immediately previous to the period when nature calls for the increase of the species; and that another movement, the reverse of this, or from the Poles towards the Equator, is in force during the autumnal and hyeinal months.

Upon the above great unerring fact, two or three conjectural observations naturally present themselves. The influence of particular climate may be sought for as more

* Such are most of the genus *Anas*, *Tringa*, *Scolopax*, and some of the *Thrushes*, with the *Snow-Bunting*.

† The *Wax-Wing* and *Cross-Bill* are instances under this head.

congenial to the production of the race. The progress of vegetation, and the consequent display of the insect tribe, may essentially operate upon the species that look to these sources for their supply of food; and, accordingly, we find the arrival of these birds hastened or retarded, as the effects of an early or late spring would suggest. During the time that insects are in the dormant and concealed state in one latitude, they may be in the active and requisite state in another, and an equalization of destruction in that tribe will doubtless have been ordained by Providence for the wisest purposes; at the same time that the feathered race themselves present to the inhabitants of different countries an important periodical object either of food or economical utility.

I shall now proceed to give an explanation of the Plumage of Birds, (with references to the outline etching on PLATE II), and to offer such a Glossary of Technical Terms (with references to PLATES 1, 2, 3, 4.) as may be found necessary in the course of the work. These plates are also intended to exhibit the leading principles of generic distinction, in a regular series; as a reference to the “Types of the Genera” (hereafter given) will demonstrate.

Let me here mention, that the Nomenclature of *Colours* adopted in the present work, is that of WERNER, as exhibited and improved by Mr SYME of Edinburgh, in a work which ought to be in the hands of every Amateur of Natural History.

EXPLANATION OF PLUMAGE.

PLATE 2. Fig. 9.

| | | | |
|------------|---------------------|---------------|------------------------------|
| <i>a</i> , | Forehead. | <i>l</i> , | Scapulars. |
| <i>b</i> , | Crown of the Head. | <i>m</i> , | Lesser Wing-coverts. |
| <i>c</i> , | Occiput. | <i>n</i> , | Bastard Wing. |
| <i>d</i> , | Nape of the Neck. | <i>o</i> , | Greater Wing-coverts. |
| <i>e</i> , | Chin. | <i>p</i> , | Secondary Quills. |
| <i>f</i> , | Cheeks. | <i>q</i> , | Primary Quills. |
| <i>g</i> , | Ear-coverts. | <i>r</i> , | Throat. |
| <i>h</i> , | Back. | <i>s</i> , | Breast. |
| <i>i</i> , | Rump, | <i>t</i> , | Abdomen. |
| <i>j</i> , | Upper Tail-coverts. | <i>u, u</i> , | Vent and under Tail-coverts. |
| <i>k</i> , | Tail. | <i>v</i> , | Tarsus. |

GLOSSARY

OR

TECHNICAL TERMS.

- Bill compressed.—When the bill is narrowed, by the mandibles being pressed in laterally. Pl. 3. Fig. 1.
- cultrated.—When each mandible is shaped like a ploughshare, with sharp edges. Pl. 1. Fig. 8.
- subulated.—When the bill is long and slender, and shaped like an awl. Pl. 3. Fig. 9.
- conical.—Pl. 4. Fig. 1.
- subconic.—Approaching to the conical form. Pl. 3. Fig. 10.
- depressed.—When the bill is flattened, by the mandibles being pressed perpendicularly. Pl. 3. Fig. 4.
- culminated.—When the central ridge of the upper mandible is very prominent. Pl. 1. Fig. 17.
- quadrangular.—Of a square form. Pl. 2. Fig. 4.
- subquadrangular.—Approaching to a square form. Pl. 2. Fig. 5.
- carinated.—When either mandible has a prominent ridge or keel. Pl. 1. Fig. 13.
- inflated.—When the sides of the mandibles bulge out. Pl. 3. Fig. 13.
- emarginated.—When either mandible is slightly notched towards the extremity. Pl. 3. Fig. 2.
- deflected.—When the upper mandible is rather bent downwards to the point. Pl. 4. Fig. 3.
- Cere.—The naked skin at the base of the bill, in which the nostrils are situated in certain genera. Pl. 1. Figs. 1, 2, 3, &c. *a.*
- Claws retractile.—Capable of being drawn back into a sheath, as in the Falcon tribe.
- Culmen.—The central ridge of the bill.
- Feathers elongated.—Lengthened, as in the crests of certain birds.
- acuminated.—Drawn to a fine point, as in the neck feathers of the Eagles.

- Feet reticulated.—When the scales appear like net-work. Pl. 4. Fig. 7.
..... plated.—When the scales are large, and overlap each other like a coat of mail. Pl. 1. Fig. 8.
- Nostrils lateral.—Situated on each side of the central ridge of the bill.
..... basal.—At the base of the bill.
..... ovoid.—Shaped like an egg.
- Phalanges.—The joints of the toes.
- Tibia.—The feathered part of the leg above the tarsus, improperly called the Thigh.
- 'Toe reversible.—Capable of being turned back, as is the case with the outer toe of many of the Owls.
..... fimbriated.—When its sides are furnished with a fringed-like appendage, as in some of the Grouses.
- Tomia.—The cutting edges of the bill.
- Tongue bifid.—Forked towards the extremity, as in the Falcon tribe.
..... extensile.—Capable of protrusion to a considerable length, as in the Woodpeckers.
..... lumbriciform.—Shaped and ringed like a worm, as in the Woodpeckers and Wryneck.
- Wings acuminated.—Having the quill-feathers drawn to a fine point, as in the Swift.

TYPES OF THE GENERA.

PLATE I.

| | <i>Genus.</i> |
|--|---------------|
| Fig. 1. <i>a</i> , Bill of Golden Eagle. | Aquila. |
| 2. <i>a</i> , Kite. | Milvus. |
| 3. <i>a</i> , Common Buzzard. | Buteo. |
| 4. <i>a</i> , Hen Harrier. | Circus. |
| 5. <i>a</i> , Goshawk. | Astur. |
| 6. <i>a</i> , Peregrine Falcon. | Falco. |
| 7. <i>a</i> , Head of Long-eared Owl. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Strix. |
| 8. <i>a</i> , Skeleton head of Carrion Crow. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Corvus. |
| 9. <i>a</i> , Head of Red-legged Chough. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Frigilus. |
| 10. <i>a</i> , Head of Nutcracker, <i>b</i> , Foot. | } Nucifraga. |
| 11. <i>a</i> , Head of Roller. <i>b</i> , Foot. | } Coracias. |
| 12. <i>a</i> , Head of Wax-wing. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Bombycilla. |
| 13. <i>a</i> , Head of Golden Oriole. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Oriolus. |
| 14. <i>a</i> , Head of Common Starling, <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Sturnus. |

| | <i>Genus.</i> |
|---|---------------|
| Fig. 15. <i>a</i> , Head of Rose-coloured Pastor. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Pastor. |
| 16. <i>a</i> , Head of Cuckoo. <i>b</i> , Foot. | } Cuculus. |
| 17. <i>a</i> , Head of Green Woodpecker. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Picus. |
| 18. <i>a</i> , Head of Wryneck. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Yunx. |

PLATE II.

| | |
|---|----------------|
| Fig. 1. <i>a</i> , Head of Nuthatch. <i>b</i> , Foot. | } Sitta. |
| 2. <i>a</i> , Head of Common Creeper. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Certhia. |
| 3. <i>a</i> , Head of Hoopoe. <i>b</i> , Foot. | } Upupa. |
| 4. <i>a</i> , Head of King's-Fisher. <i>b</i> , Foot. | } Alcedo. |
| 5. <i>a</i> , Head of Bee-Eater. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Merops. |
| 6. <i>a</i> , Head of Chimney Swallow. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Hirundo. |
| 7. <i>a</i> , Head of Swift. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Cypselus. |
| 8. <i>a</i> , Head of Goatsucker. <i>b</i> , Gape. <i>c</i> , Front view of bill. <i>d</i> , Foot. | } Caprimulgus. |

PLATE III.

| | |
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| Fig. 1. <i>a</i> , Head of Ash-coloured Shrike. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Lanius. |
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| | <i>Genus.</i> |
|---|---------------|
| Fig. 2. <i>a</i> , Head of Blackbird. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Merula. |
| 3. <i>a</i> , Head of European Dipper. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Cinclus. |
| 4. <i>a</i> , Head of Spotted Flycatcher. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Muscicapa. |
| 5. <i>a</i> , Head of Hedge-Accentor. <i>b</i> , Foot <i>c</i> , Front view of bill. | } Accentor. |
| 6. <i>a</i> , Head of Great Pettychaps. <i>b</i> , Foot. <i>c</i> , Under side of the foot. <i>d</i> , Front view of bill. | } Currucæ. |
| 7. <i>a</i> , Head of Stone-Chat. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Saxicola. |
| 8. <i>a</i> , Head of Pied Wagtail. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Motacilla. |
| 9. <i>a</i> , Skeleton head of Meadow Pipit. <i>b</i> , Foot. <i>c</i> , Front view of head. | } Anthus. |
| 10. <i>a</i> , Head of Sky-Lark. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Alauda. |
| 11. <i>a</i> , Head of Great Titmouse. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Parus. |
| 12. <i>a</i> , Head of Yellow Bunting. <i>b</i> , The same, with mouth open. <i>c</i> , Front view of bill. <i>d</i> , Inside of under mandible. <i>e</i> , Foot. | } Emberiza. |
| 13. <i>a</i> , Head of Crossbill. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Loxia. |
| 14. <i>a</i> , Head of Bullfinch. <i>b</i> , Foot. <i>c</i> , Front view of bill. | } Pyrrhula. |

PLATE IV.

| | <i>Genus.</i> |
|--|--------------------------|
| Fig. 1. <i>a</i> , Head of Gold-crested Regulus, <i>b</i> , Foot. <i>c</i> , Front view of bill. | Regulus. |
| 1*. <i>a</i> , Head of Common Wren. <i>b</i> , Foot. <i>c</i> , Front view of bill. | Troglodytes. |
| 2. <i>a</i> , Head of Greenfinch. <i>b</i> , Foot. <i>c</i> , Front view of Bill. | Coccothraustes. |
| <i>a</i> , Head of Chaffinch. <i>e</i> , Head of Goldfinch. | Fringilla. Carduelis. |
| 3. <i>a</i> , Head of Ring-Dove. <i>b</i> , Foot. <i>c</i> , Front view of bill. | Columba. |
| 4. <i>a</i> , Head of Pheasant. <i>b</i> , Foot. <i>c</i> , Front view of bill. | Phasianus. |
| 5. <i>a</i> , Head of Red Grouse. <i>b</i> , Front view of bill. | Lagopus. |
| 6. <i>a</i> , Head of Partridge. <i>b</i> , Foot. <i>c</i> , Front view of bill. | Perdix. |
| 7. <i>a</i> , Head of Collared Pratincole. <i>b</i> , Foot. <i>c</i> , Front view of bill. | Glareola. |
| 8. <i>a</i> , Head of Little Bustard. <i>b</i> , Foot. <i>c</i> , Front view of bill. | Otis. |

SYNOPTICAL TABLE
OF
BRITISH LAND-BIRDS.

ABBREVIATIONS.

I. INDIGENOUS.

P. V. PERIODICAL VISITANT.

O. V. OCCASIONAL VISITANT.

| Order. | Tribe. | Family. | Sub-family. | Genus. | ENGLISH SPECIFIC NAMES. | LATIN SPECIFIC NAMES. | Abbreviations. |
|--------|--------|---------|-------------|---|---|--|---|
| 1 | ... | 2 | ... | 1 | Egyptian Neophron, | Neophron Percnopterus, | O. V. |
| | | 3 | 1 | 2 | Golden Eagle, | Aquila Chrysaëta, | I. |
| | | | | 3 | Cinereous Sea Eagle, | Haliaetus albicilla, | I. |
| | | | | 4 | Osprey, | Pandion Haliaetus, | I. |
| | | | 2 | 5 | Goshawk, | Astur palumbarius, | I. |
| | | | | 6 | Sparrow Hawk, | Accipiter Fringillarius, | I. |
| | | 3 | 7 | 7 | Jer-Falcon, Peregrine Falcon, Hobby, Orange-legged Hobby, Kestrel, Merlin, | Falco Islandicus, Peregrinus, subbuteo, rufipes, Tinnunculus, Æsalon, | O. V. I. P. V. O. V. I. I. |
| | | | 4 | 8 | Common Buzzard, Rough-legged Buzzard, | Buteo vulgaris, Lagopus, | I. O. V. |
| | | | | 9 | Honey Buzzard, | Pernis apivorus, | O. V. |
| | | | 10 | Marsh Harrier, Hen Harrier, Ash-coloured Harrier, | Circus rufus, cyaneus, cineraceus, | I. I. P. V. | |
| | | 5 | 11 | Kite or Glead, | Milvus vulgaris, | I. | |
| | | | 12 | Swallow-tailed Elanus, | Elanus furcatus, | O. V. | |
| 4 | ... | | 13 | Great-horned or Eagle-Owl, | Bubo maximus, | O. V. | |
| | | | 14 | Long-eared Owl, Short-eared Owl, | Otus vulgaris, Otus Brachyotos, | I. P. V. | |

SYNOPTICAL TABLE OF

| Order. | Tribe. | Family. | Sub-family. | Genus. | ENGLISH SPECIFIC NAMES. | LATIN SPECIFIC NAMES. | Abbreviations. |
|--------|--------|---------|-------------|--------|-------------------------|----------------------------|----------------|
| | | | | 15 | Scops-eared Owl, | Scops Aldrovandi, | O. V. |
| | | | | 16 | Snowy Owl, | Surnia Nyctea, | O. V. |
| | | | | 17 | Barn or White Owl, | Strix Flammea, | I. |
| | | | | 18 | Tawney Owl, | Ulula stridula, | I. |
| | | | | 19 | Tengmalm's Night-Owl, | Noctua Tengmalmi, | O. V. |
| | | | | 20 | Little Night-Owl, | Passerina, | O. V. |
| 2 | 1 | 1 | ... | 21 | Common Bee-Eater, | Merops Apiaster, | O. V. |
| | | 2 | ... | 22 | Garrulous Roller, | Coracias garrula, | O. V. |
| | | | | | Chimney Swallow, | Hirundo rustica, | P. V. |
| | | | | | Martin, | urbica, | P. V. |
| | | | | | Sand Martin, | riparia, | P. V. |
| | | | | 23 | Common Swift, | Cypselus murarius, | P. V. |
| | | 5 | ... | 24 | European Goatsucker, | Caprimulgus Europaeus, | P. V. |
| | | 5 | ... | 25 | Common Kingsfisher, | Alcedo Ispida, | I. |
| 2 | 1 | ... | | 26 | Spotted Flycatcher, | Muscicapa grisola, | P. V. |
| 2 | ... | 1 | | 27 | Pied Flycatcher, | luctuosa, | P. V. |
| | | 3 | 1 | 28 | Great Cinereous Shrike, | Lanius excubitor, | O. V. |
| | | | | | Red-backed Shrike, | Collurio, | O. V. |
| | | | | | Woodchat, | rufus, | O. V. |
| | | | | | Missel Thrush, | Merula viscivora, | O. V. |
| | | | | | Fieldfare, | pilaris, | I. |
| | | | | | Song Thrush, | musica, | P. V. |
| | | | | | Redwing, | Iliaca, | I. |
| | | | | | Blackbird, | vulgaris, | P. V. |
| | | | | | Ring Ouzel, | torquata, | I. |
| | | | | 29 | European Dipper, | Cinclus aquaticus, | P. V. |
| | | | | | Golden Oriole, | Oriolus Galbula, | I. |
| 4 | 1 | 30 | | | Wheat-Ear, | Saxicola Oenanthe, | O. V. |
| | | | | | Whin-Chat, | rubetra, | P. V. |
| | | | | | Stone-Chat, | rubicola, | I. |
| | | | | 31 | Redbreast, | Erythaca rubecula, | I. |
| | | | | 32 | Common Redstart, | Phoenicura ruticilla, | P. V. |
| | | | | | Tethys Redstart, | Tithys, | O. V. |
| | | | | | Blue-throated Redstart, | suecica, | O. V. |
| | 2 | 33 | | | Grasshopper Warbler, | Salicaria Locustella, | P. V. |
| | | | | | Sedge Warbler, | Phragmitis, | P. V. |
| | | | | | Reed Wren, | arundinacea, | P. V. |
| | | | | 34 | Common Nightingale, | Philomela Luscinia, | P. V. |
| | | | | 35 | Black-cap Warbler, | Curruca atricapilla, | P. V. |
| | | | | | Greater Pettychaps, | hortensis, | P. V. |
| | | | | | Whitethroat, | cinerea, | P. V. |
| | | 3 | 36 | | Lesser Whitethroat, | garrula, | P. V. |
| | | | | | Dartford Warbler, | Melizophilus provincialis, | I. |
| | | | | 37 | Lesser Pettychaps, | Sylvia hippolais, | P. V. |
| | | | | | Wood Wren, | Sibilatrix, | P. V. |
| | | | | | Yellow Wren, | trochilus, | P. V. |
| | | | | 38 | Gold-crested Regulus, | Regulus auricapillus, | I. |
| 4 | 39 | | | | Great Titmouse, | Parus major, | I. |
| | | | | | Blue Titmouse, | coccineus, | I. |
| | | | | | Marsh Titmouse, | palustris, | I. |
| | | | | | Cole Titmouse, | ater, | I. |
| | | | | | Long-tailed Titmouse, | caudatus, | I. |

| Order. | Tribe. | Family. | Sub-Family. | Genus. | ENGLISH SPECIFIC NAMES. | LATIN SPECIFIC NAMES. | Abbreviations. |
|--------|--------|---------|-------------|--------|---|--|----------------|
| | | | | 40 | Crested Titmouse, Bearded Titmouse, | <i>Parus cristatus,</i> <i>biarmicus,</i> | I. |
| | | | | 41 | Hedge Accentor, Alpine Accentor, | <i>Accentor modularis,</i> <i>alpinus,</i> | I. |
| | | | 5 | 42 | Pied Wagtail, Grey Wagtail, Yellow Wagtail, | <i>Motacilla alba,</i> <i>Boarula,</i> <i>flava,</i> | O. V. |
| | | | | 43 | Rock or Shore Pipit, Meadow Pipit, | <i>Anthus aquaticus,</i> <i>pratensis,</i> | I. |
| | | | | 44 | Tree Pipit, Richard's Pipit, | <i>arboreus,</i> <i>Richardi,</i> | P. V. |
| 3 | 5 | 1 | 1 | 45 | Bohemian Wax-wing, Sky Lark, | <i>Bombycilla garrula,</i> <i>Alauda arvensis,</i> | O. V. |
| | | | | 46 | Wood Lark, Snow Bunting, | <i>arboarea,</i> <i>Plectrophanes nivalis,</i> | I. |
| | | | | 47 | Lapland Snow Bunting, Common Bunting, | <i>Laponica,</i> <i>Emberiza miliaria,</i> | O. V. |
| | | | | 48 | Yellow Bunting, Reed Bunting, | <i>citrinella,</i> <i>Schœniculus,</i> | I. |
| | | | | 49 | Coil Bunting, Orlotan Bunting, | <i>cirlus,</i> <i>Hortulana,</i> | I. |
| | | | 2 | 50 | House Sparrow, Tree Sparrow, | <i>Passer domesticus,</i> <i>montanus,</i> | O. V. |
| | | | | 51 | Chaffinch, Mountain Finch, | <i>Fringilla cœlebs,</i> <i>montifringilla,</i> | P. V. |
| | | | | 52 | Siskin, Goldfinch, | <i>Carduelis spinus,</i> <i>elegans,</i> | P. V. |
| | | 3 | | 53 | Common Linnet, Mountain Linnet, | <i>Linaria cannabina,</i> <i>montana,</i> | P. V. |
| | | | | 54 | Lesser Redpole Linnet, | <i>minor,</i> | I. |
| | | | 4 | 55 | Hawfinch Grosbeak, Green Grosbeak, | <i>Coccothraustes vulgaris,</i> <i>chloris,</i> | O. V. |
| | | | | 56 | Common Crossbill, Parrot Crossbill, | <i>Loxia curvirostra,</i> <i>Ptyopsittacus,</i> | O. V. |
| | 2 | ... | | 57 | Pine Bullfinch, Common Bullfinch, | <i>Pyrrhula enucleator,</i> <i>vulgaris,</i> | O. V. |
| | | | | 58 | Common Starling, | <i>Sturnus vulgaris,</i> | O. V. |
| | 3 | ... | | 59 | Rose-coloured Pastor, | <i>Pastor roseus,</i> | O. V. |
| | | | | 60 | Raven, | <i>Corvus Corax,</i> | O. V. |
| | | | | 61 | Carriion Crow, Hooded Crow, | <i>corone,</i> <i>cornix,</i> | I. |
| | | | | 62 | Rook, | <i>frugilegus,</i> | I. |
| | | | | 63 | Jackdaw, | <i>monedula,</i> | I. |
| | | | | 64 | Magpie, | <i>Pica melanoleuca,</i> | I. |
| | | | | 65 | Common Jay, | <i>Garrulus glandarius,</i> | I. |
| | | | | 66 | Cornish Chough, | <i>Fregilus graculus,</i> | I. |
| | 2 | ... | | 67 | Nutcracker, | <i>Nucifraga Caryocatactes,</i> | O. V. |
| | | | | 68 | Green Woodpecker, | <i>Picus viridis,</i> | I. |
| | | | | 69 | Great Black Woodpecker, | <i>martius,</i> | O. V. |
| | | | | 70 | Great Spotted Wood- pecker, | <i>major,</i> | I. |
| | | | | 71 | Lesser Spotted Wood- pecker, | <i>minor,</i> | I. |

| Order. | Tribe. | Family. | Sub-Family. | Gen.s. | ENGLISH SPECIFIC NAMES. | LATIN SPECIFIC NAMES. | Abbreviations. |
|--------|--------|---------|-------------|--------|-------------------------|-------------------------------|----------------|
| 3 | ... | 3 | ... | 62 | Wryneck, | <i>Yunx torquilla,</i> | P. V. |
| | | | | 63 | Nuthatch, | <i>Sitta Europea,</i> | I. |
| | | | | 64 | Common Creeper, | <i>Certhia familiaris,</i> | I. |
| | | | | 65 | Common Wren, | <i>Troglodytes Europaeus,</i> | I. |
| | | | | 66 | Common Hoopoe, | <i>Upupa Epops,</i> | O. V. |
| | | 4 | ... | 67 | Cuckoo, | <i>Cuculus canorus,</i> | P. V. |
| | | | | 68 | Ring Dove, | <i>Columba Palumbus,</i> | I. |
| | | | | | Stock Dove, | <i>Ænas,</i> | I. |
| | | 1 | ... | | Rock Dove, | <i>livia,</i> | I. |
| | | | | | Turtle Dove, | <i>Turtur,</i> | P. V. |
| | | 2 | ... | 69 | Common Pheasant, | <i>Phasianus colchicus,</i> | I. |
| | | | | 70 | Black Grouse, | <i>Tetrao Tetrix,</i> | I. |
| | | 3 | ... | 71 | Red Grouse Ptarmigan, | <i>Lagopus Scoticus,</i> | I. |
| | | | | | Common Ptarmigan, | <i>mutus,</i> | I. |
| | | | | 72 | Common Partridge, | <i>Perdix cinerea,</i> | I. |
| | | 4 | ... | | Quail, | <i>coturnix,</i> | P. V. |
| | | | | 73 | Great Bustard, | <i>Otis tarda,</i> | I. |
| | | | | | Little Bustard, | <i>tetrax,</i> | O. V. |

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ILLUSTRATIONS

OF

ORNITHOLOGY.

ILLUSTRATIONS

OF

BRITISH ORNITHOLOGY.

ORDER I.

RAPTORES, *VIGORS.*

IN the natural arrangement, or that founded upon the affinities connecting the various tribes of the feathered race, the Raptorial Order constitutes the first of the five great divisions into which the Class *Aves*, like those of the other departments of the animal kingdom, may be divided: a number, it may be observed, to which not only the primary, but also all the minor subdivisions, of such departments as have hitherto undergone investigation, appear to be limited. Of these divisions, it is one of the two which are considered typical or representative (the Order *Incessores* being the other), and is composed of the various groups generally known as *Birds of Prey*; answering to the *Accipitres* of LINNEUS, and analogous to the Carnivorous Animals of the Class *Mammalia*. The compact yet powerful body, the predatory habits, the decided partiality for animal food, the strong and hooked bill, the muscular limbs, the curved and often semi-retractile claws, and other distinguishing traits, separate the birds of

this Order from all the others; though, at the same time we must remark, that modifications of form and character are met with in the less typical members sufficient to support the necessary connection with the other orders of the Class. In this Division four Families only have yet been recognised, viz. the *Vulturidæ*, *Falconidæ*, *Strigidæ*, and *Gypogelanidæ*. Of these the three first mentioned embrace the extensive Linnean genera *Vulture*, *Falco*, and *Strix*; the fourth is represented by the African Serpent-Eater (*Secretary Vulture* of LATHAM). The fifth, necessary to complete the series of affinities within the circle of this Order, is still wanting.

FAMILY II.* VULTURIDÆ.

The *Vulturidæ*, which form one of the typical families of the order, are distinguished by having the head more or less divested of feathers, the bill strait at the base, and covered with a cere, either thinly covered with hair or naked, simple or carunculated; their limbs are muscular and generally short, the tarsi and feet naked, the latter armed with rather strong, but not very hooked talons. They principally subsist upon carrion and decomposing animal matter; but, as might be expected, the forms which approach nearest to the *Falconidæ* occasionally prey upon living subjects. They are mostly inhabitants of the warmer regions of the globe, where they act an important and salutary part in the economy of nature, by clearing the surface of noxious and putrid animal remains. Their wings are ample, and their flight, which is powerful, and can be long sustained, is generally described in wide circles. In this family, five distinct forms have been admitted; two of which, genus *Vultur* and genus *Sarcoram-*

* According to the system of Mr VIGORS (the one here adopted), the aberrant family of *Gypogelanidæ* stands first, as the typical families invariably occupy the middle station. But, in this work, we commence of course with the *second* family, as the first affords no *British* species.

phus, as possessing the peculiar features of the family in the highest degree, are justly considered its typical representatives; the other three are aberrant, viz. the genera *Neophron*, *Cathartes*, and *Gypaëtos*, in which a deviation of structure is perceptible, and which serve, from the affinities they exhibit, not only to complete the circle of their own family, but to connect it with those belonging to other orders of the class.

GENUS NEOPHRON (*SAVIG.*) NEOPHRON.

GENERIC CHARACTERS.

Bill elongated, slender, strait; the upper mandible covered with a cere for half its length, and with a distinct hooked dertrum or tip. The lower mandible curving downwards at the point, with no apparent gony or angle. Nostrils longitudinal, lateral, directed forwards, and placed near to the culmen of the bill. Anterior part of the head and the face naked; the neck covered with acuminate feathers. Wings ample, the third quill-feather being the longest. Tail of fourteen feathers. Legs of mean strength and length; the tarsi reticulated. Feet with four toes; three before, and one behind. The front toes united at the base. Claws strong, slightly hooked, and blunt. Under surface of the toes scabrous.

This genus, which was first established by SAVIGNY, has since been adopted by Mr VIGORS, who makes it one of the five forms recognisable in the family of the *Vulturidæ*. It belongs to the aberrant division, or that in which the groups indicate a modification of those peculiar characters that distinguish the typical divisions, represented (as I have before stated) by genus *Vultur* and genus *Sarcoramphus*. Its structure, according to the affinities displayed, seems intermediate between the genus *Gypaëtos*, of which the *Vultur barbatus* of authors is the type, (and which more immediately connects the *Vulturidæ* with the succeeding family of

the Falconidæ), and the genus *Cathartes*, restricted by the ornithologists of the present day to certain species belonging to America, of which *Cathartes Aura* and *Cathartes Uruba* are the representatives. From this latter group the present genus differs, not only in geographical distribution, but in having the neck more fully clothed with feathers, and the bill and legs of still weaker conformation. It is restricted to the old world, and has for its type the *Neophron Percnopterus* of SAVIGNY (*Vultur Perc.* of LINNÆUS). In habits these birds are, if possible, more filthy than any of the other members of this family, their food consisting almost wholly of the rankest carrion and most disgusting offal of every description. They are also of a more timid character, appearing very destitute of the boldness that characterizes the larger and more typical Vultures.

EGYPTIAN NEOPHRON.

NEOPHRON PERCNOPTERUS, Savig.

PLATE A.

- Neophron Percnopterus, *Savig.* Ois. de l'Egypt, p. 16.—*Vigors* in *Zool. Journ.* 2. 380.—*Jardine* and *Selby*, *Illust. of Orn.* 1. pl. 33.
Vultur Percnopterus, Linn. Syst. 1. 123. 7.—*Lath.* Ind. Orn. 1. 2. sp. 3.—*Shaw's Zool.* 5. 7. pl. 33.
Alpine Vulture, Lath. Syn. 1. 12; Id. Sup. 3.
Vultur Ægypticus, Lath. Ind. Orn. 1. 2. var. B.
Sacre d'Egypt, Buff. Ois. 1. 167.
Egyptian Vulture, Lath. Syn. 1. p. 13.
Vultur leucocephalus, Lath. Ind. Orn. 2. 1. sp. 4.
Vautour de Norvege, Buff. Ois 1. 164.
Ash-coloured Vulture, Lath. Syn. 1. p. 3.
Vultur Angolensis? *Lath.* Ind. Orn. 1. 7. sp. 17.
Angola Vulture? *Penn.* Tour in Wales, 1. 307. pl. 16.—*Lath.* Syn. 1. 18?
Vultur fuscus, Gmel. Syst. 1. 248.—*Lath.* Ind. Orn. 1. 5. sp. 10.
Vautour de Malte, Buff. Ois 1. 161.
Maltese Vulture, Lath. Syn. 1. 15.
Vultur ginginianus, Lath. Ind. Orn. 1. 7. sp. 16.
Gingi Vulture, Lath. Syn. 1. 7.—*Shaw's Zool.* 7. 37.
Cathartes Percnopterus, Temm. Man. d'Orn. 1. 8.—*Steph. Shaw's Zool.* 13. 7. sp. 1.
Le Percnoptere d'Egypt, Cuv. Reg. Anim. 1. 307.
Vautour l'Origon, Le Vaill. Ois. d'Afric, 1. p. 14.
Rachamah, or Bird of Pharaoh, Bruce's Travels, App. 163.

Since the publication of the first volume of the "Illustrations," a bird of this species has been killed upon the western coast of England, in an undoubted wild and natural state, thus entitling it to a place in the list of our fauna, as a rare visitant. The specimen is now in the possession of the Rev.

^{tant.}

A. MATTHEW of Kilve, in Somersetshire, near which place it was shot in October 1825, and who kindly favoured me with the loan of the specimen, accompanied by the following particulars relating to its capture. When first discovered, it was feeding upon the carcass of a dead sheep, and had so gorged itself with the carrion, as to be unable or unwilling to fly to any great distance at a time, and was therefore approached without much difficulty and shot. Another bird similar to it in appearance, was seen at the same time upon wing at no great distance; which remained in the neighbourhood a few days, but could never be approached within range; and which was supposed to be the mate of the one killed. The state and colour of the plumage of this individual, judging from the descriptions given of the species by TEMMINCK and other authors, indicate a young bird probably of the first, or, at the farthest, of the second year. The livery of the adult (*Vultur gingianus* of LATHAM) being of an uniform white, with the exception of the greater quills, which always remain black. The changes of plumage to which it is subject, and the different appearance it assumes under each, have given rise to the creation of several supposed distinct species, as is evident from the list of synonyms quoted; but I am convinced that most of them may be satisfactorily traced to the bird in question, excepting only the Angola Vulture of PENNANT (*Vultur Angolensis* of LATHAM,) which (from his description, and the figure given in his "Tour through Wales") is difficult to be reconciled with any state of *Neophron Percnopterus*. In Europe, the species is not uncommon in Spain, Malta, and Turkey, and it is sometimes also met with in Italy, and as far as Switzerland.

Food.

Africa, however, is the country most congenial to its economy, in which quarter of the globe it is both abundant and widely diffused. In its affinities it is nearly allied to those American Vultures which form the genus *Cathartes*, as now restricted by ornithologists; and may in fact be considered as their representative upon the ancient continent. It also in some particulars connects the more typical Vultures with the genus *Gypaëtos*, leading immediately to the *Falconidæ*, and represented by that powerful and daring species *Vultur barbatus*, the Bearded Vulture of authors, and in another work* it has been observed that its bill in form approaches very closely to that of *Tachypetes*, one of those oceanic *Pelecanidae*, which seem to connect the *Natatorcs* with the terrestrial order *Raptiores*. Its habits are very similar to those of the American *Catharti*, so graphically described by AUDUBON and other transatlantic writers, as it rejects no dead animal matter, delighting even in the most putrid carrion. On this account it is held in deserved respect, and protected by the inhabitants of those countries in which it abounds, as an able coadjutor in clearing away the filth and putrid matter, which, in climates of so warm a temperature, would otherwise become pestilential, by infecting the air with unwholesome effluvia. In addition to the above mentioned food, it occasionally preys upon lizards and other reptiles, but is rarely known to attack the smaller living animals or birds. It possesses a great power of flight, from the wings being very long and ample, and the tail produced and wedge-shaped, circumstances that enable it to soar in extended circles with great buoyancy, and it is in these aerial flights, that it searches for its food upon the ground beneath, which this and the other *Vulturidæ* are now supposed to detect more by strength and quickness of sight, than (as was formerly supposed) by the extraordinary perfection of their

* See Illustrations of Ornithology, by Sir WILLIAM JARDINE and P. J. SELBY, vol. 1st, plate 33, article *Neophron Perenopterus*.

organ of smell*. It is reported to breed in caverns and the clefts of rocks, but the number and colour of its eggs have not been described. Its cry is seldom heard, and when at rest it generally sits upon the ground with the wings depending, a habit common to the Vulturidæ. In a living state it emits a very strong effluvium, partaking of the nature of its corrupted food, and when killed it putrefies very rapidly.

PLATE A. Represents this Bird of the natural size. When General killed, it measured two feet seven inches in length, and in extent of wing five feet nine inches. From the forehead to the tip, its bill measured two inches and a-half; the tarsus three inches, and the middle toe with its claw the same. Bill brownish-black or horn-coloured; the cere (which bulges a little at the base, and occupies half the length of the bill) wine-yellow; nostrils situated near the middle of the cere, large and open in front. Crown of the head, cheeks, and throat, covered with a naked skin, of a livid flesh-coloured red, with a few straggling bristles between the bill and eyes, and upon the margins of the mandibles. Ears round, open, and large. Occiput and nape covered with a close thick set white down, with small black feathers intermingled. Neck with clothed long, arched, and acuminate feathers, forming a kind of ruff of a deep umber-brown, tipped with cream yellow. Back and scapulars cream-white; the latter intermixed and varied with umber brown. Lesser wing-coverts, nearest the body, deep umber-brown, margined with a paler shade; these are succeeded by two rows of cream-coloured sharp-pointed feathers. Greater coverts umber-brown, varied with cream-white. Secondaries pale umber-brown, with their tips and mar-

* To some interesting experiments relating to this subject, I refer my readers to observations on the habits, &c. of the *Turkey Buzzard* and *Carrion Crow*, (*Cathartes aura* and *C. Uruba*,) by J. J. AUDUBON, published in the Edinburgh Philos. Jour. for October 1826.

gins yellowish-white. Quills black, tail wedge-shaped, umber-brown at the base, with the tips yellowish-white, hinder parts mixed with umber-brown. Legs strong and fleshy, of a pale yellowish-grey. The tarsi covered with a rough reticulated skin. The middle toe having four entire scales upon the last point, the outer and inner toes each with three; hind toe short and strong. Claws blackish-brown, strong, and but slightly curved.

Adult.

In the adult state the whole of the plumage, with the exception of the greater quills, is white; the space between the bill and eyes covered with a white down; the base of the bill, forehead, cheeks, and throat, naked, and of a pale flesh-coloured red; the feathers upon the occiput long and narrow, forming a kind of crest; irides red; legs and feet pale grey.

FAMILY III. FALCONIDÆ.

THE Falconidæ, which form the second *typical* family of the order, may be considered as embracing all those various “birds of prey” that feed in the day time, which are arranged by LINNÆUS and other systematists under the extensive genus *Falco*. In these, the head (except in the species more immediately connecting them with the *Vulturidæ*) is clothed with feathers; the bill is strong and short, much hooked, and in the typical species bending immediately from the base, which is covered with a naked and coloured cere; the nostrils are lateral, more or less rounded, and placed in the cere; the legs, which are either naked or feathered to the toes, are of mean length, but muscular and strong, and the tibial joint considerably elongated, to aid as a powerful lever in pouncing their prey. Their front toes are partially united at the base, particularly the outer and middle ones; and their claws, which are much incurved, are very sharp, and in general partially retractile. To symmetry of form they unite

great strength and activity, and the typical groups possess a power of flight both as to duration and swiftness, superior to most of the feathered race; their vision is also wonderfully acute, and they are distinguished for courage and audacity. They prey almost entirely upon living creatures, which they either strike upon the wing (the mode adopted by the typical genera) or pounce upon the ground, like the Buzzards and Kites. Birds and quadrupeds are the usual food of most of the species; some, however, prey on fish, and others principally subsist upon the larger coleopterous insects. They tear their prey in pieces with their bill and claws, and parts of the feathers and fur being swallowed with the flesh, are afterwards ejected (together with the bones and other indigestible portions) in pellets by the mouth. They generally lead a wandering and solitary life, except in the season of incubation, or at farthest continue associated in pairs as male and female, which is sometimes observed in birds of the aquiline kind. The numbers of this family, as might be expected from their typical character, are very numerous, and distributed over every portion of the globe. Many of the species in their progress from the young to the adult state, (which in some is not attained before the third, in others the fourth or fifth year), undergo great and remarkable changes. This circumstance, from a want of observation, and indeed very often of opportunity for close investigation, has given rise to several errors among writers on Ornithology, and has caused great confusion, and a consequent incorrect multiplication, of species. The gradual increase of knowledge, in this, as well as other branches of Zoology, and the labour of several recent naturalists (among whom stand prominent the names of TEMMINCK and MONTAGU), have, however essentially contributed to the development of these singular and unexpected changes of plumage, and cleared up many of the doubts and difficulties, in which the history of several species had been so long involved. By many modern ornithologists, five subordinate divisions or subfamilies,

have been recognised in the Falconidæ; viz. *Aquilina*, *Accipitrina*, *Falconina*, *Buteonina*, and *Milvina*, which again are divisible, into groups of still less amount, constituting the genera of the present work *, and all forming a circular series of affinities within themselves. Of these Subfamilies, the Accipitrina and Falconina are the typical forms, possessing peculiarities of structure, habits, &c., which either do not exist, or become modified in the others.

SUBFAMILY AQUILINA.

THE distinguishing characters of this Subfamily, consist in superiority of size, in having the bill longer and straiter at the base than in the typical Falcons, in which respects they approach nearer to the Vulturine Family; the feathers of the crown of the head and neck are narrow and sharp-pointed, and in some subjects the head and throat are found partially naked. Their limbs are generally short and muscular, and their talons very strong and much hooked. In this subdivision we find the most powerful and destructive birds of the Family, as well as others, which partaking more of the Vulturine form and disposition, are less predaceous, and frequently content themselves with prey already dead, or, in some instances, with carrion. Towards the farther extremity other forms are met with, which connect this Subfamily more immediately with the Accipitrinæ and others of the Order.

* By Mr SWAINSON, in that beautiful and valuable national work, the Fauna Americana Borealis, these Subfamilies are considered as Genera; the inferior groups (answering to the genera of this work) being distinguished by the appellation of Subgenus. His remarks upon this Family are highly interesting, and deserving of repeated and attentive perusal by every ornithologist.

GENUS AQUILA (*BRISS.*) EAGLE.

GENERIC CHARACTERS.

BILL strait at the base, strong, much hooked at the point, compressed, with the sides inclining upwards, and forming a narrow ridge or culmen. The tomia or cutting edges of the upper mandibles having a faint obtuse lobe, situated behind the commencement of the hook. Nostrils oval lateral, transversely placed in the cereous part of the bill. Space between the nostrils and eye-orbits thinly covered with radiating hairs. Wings ample; with the fourth and fifth quill-feathers the longest in each wing. Legs having the tarsi thickly clothed with feathers to the toes. Toes rather short, the outer and middle ones united at the base by a membrane. Claws very strong, hooked, and very sharp, grooved beneath; those upon the outer and hind toes the largest.

The members of this genus are not less distinguished for their size and strength than for those bold and destructive habits, in which they emulate the typical subdivisions of the Family. They do not, however, possess the same facility of pursuing their prey upon wing, which we see in the Falcons and Hawks; for though their flight is very powerful, they are not capable of the rapid evolutions that attend the aerial attacks of the above named groups; in consequence of which their prey is mostly pounced upon the ground. They attack the larger birds and animals, and, unless pressed by extremity of hunger, refuse to feed upon carrion, or even any prey already dead. Their form is compact and strong, and their gait and aspect are active and alert, being entirely devoid of the sluggish appearance that characterizes the genera more nearly allied in habits and form to the *Vulturidae*. The genus possesses an extensive geographical distribution, the species being found in all quarters of the globe. These are

mostly the inhabitants of mountainous districts, where they breed amongst inaccessible precipices, and in lofty trees. The young are four or five years in attaining maturity, and during this period, undergo considerable changes of plumage.

GOLDEN EAGLE.

Aquila Chrysaeta, Flem.

PLATE I. I*. AND II.

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| <i>Synonyms of the Adult.</i> | <p><i>Aquila Chrysaëta, Shaw's Zool.</i> 13. 15.—<i>Faun. Amer. Boreal.</i> 2. 12. No. 4. —<i>Flem. Br. Anim.</i> 1. 52. No. 18.</p> <p><i>Falco Chrysaëtos, Linn. Syst.</i> 1. p. 125. 5.—<i>Fauna Suec.</i> p. 54.—<i>Gmel. Syst</i> 1. p. 256.—<i>Lath. Ind. Ornith.</i> 1. p. 12. sp. 8.—<i>Raii, Syn.</i> p. 6. 1. <i>Muller.</i> No. 59.—<i>Briss.</i> 1. p. 431. 7.—<i>Ib. 8vo.</i> p. 124.</p> <p><i>L'Aigle Royal, Buff. Pl. Enl.</i> 410. the female.—<i>Id. Le Grand Aigle.</i> <i>L'Aigle Commun, et L'Aigle Royal, Cuv. Reg. Anim.</i> v. 1. p. 314.—<i>Aigle Royal, Temm. Man. d'Ornith.</i> v. 1. p. 38. 2d edit.</p> <p><i>Golden Eagle, Br. Zool.</i> 1. No. 42. t. 16.—<i>Id. fol.</i> p. 61. t. A.—<i>Arct. Zool.</i> 2. p. 214. a.—<i>Lewin's Br. Birds,</i> 1. t. 2.—<i>Lath. Syn.</i> 1. p. 31.—<i>Id. Supp.</i> p. 10.—<i>Mont. Ornith. Dict.</i> vol. 1.—<i>Id. Sup.</i>—<i>Will. Ang.</i> p. 58.—<i>Bewick's Br. Birds,</i> p. 5.—<i>Walc. Syn.</i> 1. t. 3.—<i>Shaw's Zool.</i> v. 7. p. 75.</p> <p><i>Falco fulvus, Linn. Syst.</i> 1. p. 125. 6.—<i>Gmel. Syst.</i> 1. p. 256.—<i>Lath. Ind. Ornith.</i> 1. p. 10. 4.</p> <p><i>Falco niger, Gmel.</i> p. 359.</p> <p><i>Chrysaëtos cauda annulo albo cincta, Raii, Syn.</i> p. 6. 2. <i>Will. Ang.</i> p. 28.</p> <p><i>Aquila fulva, Meyer, Vög. Liv. und. Esthl.</i> p. 2.</p> <p><i>L'Aigle commun, Buff. Gis.</i> v. p. 86.—<i>Id. Pl. Enl.</i> 409. an accurate figure of the young bird.</p> <p><i>Black Eagle, Br. Zool.</i> p. 165. No. 43.</p> <p><i>Ring-tail Eagle, Br. Zool. fol.</i> p. 62.—<i>Will. Ang.</i> p. 59.—<i>Lath. Syn.</i> 1. p. 32.—<i>Id. Suppl.</i> p. 10.—<i>Lewin's Birds,</i> 1. t. 3.—<i>Mont. Ornith. Dict.</i>—<i>Id. Suppl.</i>—<i>Bewick's Br. Birds,</i> p. 7.—<i>Low's Fauna Oread.</i> p. 31.—<i>Shaw's Zool.</i> vol. 7. p. 71.—<i>Wils. Amer. Orn.</i>—<i>Ed. Sir Wm. Jardine,</i> 2. 304. pl. 55. fig. 1.</p> |
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THE two figures given in this work (upon a scale of two-fifths of the natural size) represent a female of this species in different attitudes; the first being its usual carriage when in a state of rest, the second displaying its remarkable manner when it has pounced, and exults over its prey. The bird from which the drawings were taken, is alive in my

possession, and was obtained from the Highlands of Perthshire.

In the brief Descriptions that accompanied the progressive publication of the Engravings, I stated an opinion that the *Falco Chrysaëtos* and *Falco fulvus* of authors were distinct species.

In consequence of some doubts having arisen as to the correctness of this supposition, I was led, since that period, to direct my attention particularly to the history of these birds ; and the result of further examination has convinced me, that the former opinion had been too hastily adopted. I now concur with Mons. TEMMINCK in considering them as individuals of the same species, at different periods of age : the *Chrysaëtos* denoting the adult ; the *Fulvus* the young, or immature bird.

After the inspection of several specimens, and minute inquiry in those districts of Scotland where eagles abound, it would seem that the white ring, which distinguishes the *F. fulvus*, is confined to birds of a certain age. During the first year, the ring appears well defined, occupying the larger and upper half of the tail ; but at the moult which takes place subsequent to this age, the line between the white and lower or dark part of the tail becomes interrupted, and a few patches of a hair-brown colour make their appearance, advancing upon the white ring.

At this age, and under this very state of feather, I had an opportunity of examining two living specimens at Mar Lodge in Aberdeenshire, which had been taken from the same nest in the preceding year. Each succeeding change of feathers, or moult, adds to the size of the brown patches, till the bird has attained maturity (that is, its fourth year), when the whole of the tail appears barred with *hair* and *dark-brown*, the roots of the feathers only remaining *white* ; after which it undergoes no further change. In the rest of their plumage, the difference between the *young* and *adult* bird is trifling ; and in other essential characters, viz. the size and form

of the bill, the number of scales upon the feet, and anatomical structure, they appear perfectly similar *.

It is amongst the largest of the European species, the females often measuring three feet and a half in length, and upwards of eight feet across, when the wings are extended. It is a native of the mountainous parts of Ireland and Scotland, where it still by no means of rare occurrence, and may generally be seen soaring to a vast height in the air. In those districts, it often commits great havoc amongst the lambs, and is therefore proscribed by the inhabitants, who use every method in their power to extirpate the breed ; but the inaccessible nature of the cliffs in which its eyry is generally placed, proves a sufficient safeguard.

Food.

Its prey consists of the larger quadrupeds and birds, such as roebucks, fawns, lambs, black and red grouse, &c. ; and it is only under extremity of hunger that the Golden Eagle

Nest, &c.

will feed upon a dead carcass or carrion.—Its nest is usually placed upon some shelf of rock, or on the summit of a tree that springs from the cliff ; is of large dimensions, and formed of sticks, heath, &c. The eggs, generally two in number, are of a *greyish-white* colour, clouded with spots of reddish-brown †. An interesting description of the nest and young

* According to Mr BULLOCK, both the *Fulvus* and *Chrysaëtos* breed in the Orkneys. I do not mean to doubt the assertion, so far as supposition extends ; but may not the mere separation of residence that takes place between the adult birds, and those yet in an immature state, lead cursory observers to think that the process of incubation, &c. is going on in both situations ? If such is the fact, and they are the same species, it would appear that the imperfect state of plumage, in their progress to the adult bird, does not retard maturity, with respect to propagation ; though we might look for such an effect, from knowing that many species of the genus *Larus* (Gull) do not breed previous to the attainment of their adult plumage. What would therefore contradict the usual course of Nature, must be admitted with suspicion, and leads me, inclined as I am to the opinion of their identity, to believe in the unintentional inaccuracy of the assertion. It is a point fairly open to strict examination, and one that courts positive proof.

† Since the publication of the first Edition of this Work, the female bird above mentioned and figured, has for three successive years laid one egg

of this species, found in the woodlands of the Peak of Derbyshire, is given in WILLOUGHBY's Ornithology, who rightly conjectured that the *Golden* and *Ring-tailed* Eagles formed but one species.

The vision of the Eagle is wonderfully acute, and the distance at which it can discern its prey is truly astonishing.

MONTAGU *, in the Supplement to his Ornithological Dictionary, mentions some curious instances of the perfection of this faculty. Indeed, it would appear, that the elevated height at which it soars, is the favourite station from whence to seek for prey, as it is from such altitudes that it generally stoops, and carries off its victim. It seldom strays far from its native haunts ; and the instances are rare of its having been seen in England, or even in the Lowlands of Scotland.

BEWICK mentions a very large one, as killed near Warkworth in Northumberland, which measured eleven feet in extent of wing.

Having had two living birds of this species in my possession for some years, I have been enabled to give close attention to their peculiar habits. In disposition, they appear untameable, their fierceness being in no respect diminished since I first received them. They do not exhibit any partiality even for the person who constantly attends and feeds them, but are as ready to attack him as a stranger. They shew a decided preference to living prey, and will not eat offal or carrion, except when pressed by hunger. Hares, rabbits, and cats, are favourite food. Living prey thrown to them is instantly pounced on by a stroke behind the head, and another about the region of the heart ; the bill appearing

or more, in size and colour resembling those deposited in a wild state. Previous to laying, she becomes very restless and noisy ; and endeavours to form a nest of sticks (purposely thrown into the cage), grass, feathers, and any other loose materials. An anxious desire to incubate is also shewn, but no experiments have yet been made to ascertain how far she would carry this instinctive feeling.

* See MONT. Ornith. Diet. Suppl. articles *Ring-tail Eagle*, &c.

never to be used, but for the purpose of tearing up their prey when dead.

Part of the fur is generally swallowed, and afterwards disgorged with the bones, &c. in large pellets or castings, by the mouth; but they display some adroitness in skinning an animal, and birds are in general partially plucked with great dexterity.

They rarely drink, but during the heat of summer are very partial to washing themselves.

The Female becomes noisy at the approach of spring, and is observed to be particularly clamorous previous to wet or stormy weather.

General description.

Adult bird.

PLATE 1. A female bird.—Bill bluish at the base, the tip black. Cere lemon-yellow. Irides orange-brown. Primary quills black; the secondary ones clouded with hair-brown, broccoli-brown, and umber-brown. Crown of the head, and nape of the neck, pale orange-brown, the feathers occasionally margined with white, narrow, elongated and distinct. Chin and throat, dark umber-brown. Vent pale reddish-brown. Tail pale broccoli-brown, barred with blackish-brown, and ending in a broad band of the same colour. Tarsi clothed with pale reddish-brown feathers. Toes naked, yellow. Claws black, very strong, and much hooked.

PLATE 1 *. The same bird, in a different attitude.

Young bird.

PLATE 2. Represents the young or immature bird of this species, generally known by the name of the *Ring-tail Eagle*, in about two-fifth parts of the natural size. This bird, of one year old, is now alive, and in the possession of Sir WILLIAM JARDINE, Bart. †. Bill having the

† I have since had the gratification of witnessing the progressive changes from adolescence to maturity in this individual. It is almost unnecessary to add, that at the age of four years it exhibited the appropriate plumage of the *Golden Eagle*.

base bluish-grey, and the rest black. Cere lemon-yellow. Irides clear dark chesnut-brown. Forehead dark chesnut-brown. Crown of the head, and nape of the neck, yellowish-brown, inclining to pale orange-brown; the feathers narrow, distinct, and pointed. Throat and under part of the neck dark umber-brown. Breast and belly dark brown, with a few white feathers intermixed. Inside of the thighs *white*. Vent and under tail-coverts white, having some of the feathers tipped with brown. Back and wing coverts very intense umber-brown. Upper tail-coverts white, some of them being tipped with brown. Tail, for two-thirds of its length, white; the remainder (or end part) blackish-brown. Greater quills very intense brown, or blackish-brown, having their bases white. Secondaries, for two-thirds of their length from the base, white. Tarsus clothed with white feathers. Toes lemon-yellow. Claws black.

GENUS HALIÆETUS, SAVIG. SEA-EAGLE.

GENERIC CHARACTERS.

BILL elongated, strong, straight at the base, curving in a regular arc in advance of the cere to the tip, and forming a deep hook. Culmen broad, and rather flattened. Tomia of the upper mandible slightly prominent behind the commencement of the hook. Nostrils large, transversely placed in the cere, and of a lunated shape. Wings ample; the fourth quill-feather the longest. Legs having the tarsi half feathered, the front of the naked part scutellated, and the sides and back reticulated. Toes divided to their origin; the outer one versatile. Claws strong and hooked, grooved

beneath ; the claw of the hind toe larger than that of the inner, which again exceeds that of the middle and outer toes.

This genus, of which our Sea-Eagle (*Falco albicilla*, Auct.) supplies an example, differs from the Ospreys or true fishing Eagles (genus *Pandion*, Savig.) in the form of the bill, and in the claws being grooved, and not rounded beneath ; with that upon the inner toe being much larger and stronger than that of the outer, the contrary of which characterizes the genus *Pandion*. The plumage is also different in texture, being looser, and resembling that of the typical Eagles, and the thighs, instead of a covering of short and thick set feathers, are furnished with long plumes, a circumstance which indicates a difference of economy. The habits of this genus are less predatory, and their boldness is not so great as in the members of the genus *Aquila*, added to which, their aspect altogether approaches nearer to that of the Vultures.

CINEREOUS SEA-EAGLE.

HALIÆETUS ALBICILLA, *Mih.*

PLATES III. and III *.

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| Syn. of Adult. | <ul style="list-style-type: none"> <i>Falco albicilla</i>, <i>Gmel.</i> Syst. 1. p. 253.—<i>Lath.</i> Ind. Ornith. 1. p. 9. 2.— <i>Fauna Suec.</i> No. 55.—<i>Müller</i>, No. 58. <i>Vultur albicilla</i>, <i>Linn.</i> Syst. 1. p. 123. 8. <i>Aquila albicilla</i> seu <i>Fygargus</i>, <i>Briss.</i> Ornith. 1. p. 427. 5.—<i>Will.</i> Orn. p. 31.—<i>Raii</i>, Syn. p. 7. 5. <i>Falco albicaudus</i>, <i>Gmel.</i> p. 258. sp. 51. Le Grand Pygargue, <i>Buff.</i> Ois. vol. 1. p. 99. Aigle Pygargue, <i>Temm.</i> Man d' Ornith. 1. p. 49. 2d ed. Fisch.-Adler, <i>Bechst.</i> Tasch. Deut. v. 1. p. 10. sp. 5. White-tailed Eagle, <i>Will.</i> Angl. p. 61.—<i>Bewick's Birds</i>, 1. p. 9. Cinereous Eagle, <i>Br. Zool.</i> 1. No. 45. t. 18.—<i>Arct. Zool.</i> 2. p. 214. B.—<i>Lath.</i> Syn. I. p. 33. No. 3.—<i>Id. Suppl.</i> p. 11.—<i>Lewin's Birds</i>, 1. t. 4.—<i>Mont. Ornith. Dict.</i> 1. vol.—<i>Id. Suppl.</i>—<i>Shaw's Zool.</i> vol 7. p. 79.—<i>Don.</i> Br. Birds. Erne, <i>Low's Fau. Orcad.</i> p. 34. |
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Falco Ossifragus, *Linn.* Syst. 1. p. 124. 3.—*Gmel.* Syst. 1. p. 255. 4.—
Lath. Ind. Ornith. 1. p. 12. 7.—*Raii*, Syn. p. 7. 3.—*Will.* p. 29. t. 1.
Muller, No. 60.

Falco Melanæetus, *Gmel.* p. 254. Sp. 2.—*Lath.* Ind. Ornith. 1. p. 10. 3.
Linn. 1. p. 124. 2.—*Raii*, Syn. p. 7. 4.—*Will.* p. 30. t. 2.—*Briss.* 1.
 p. 434. 8.

Aquila Ossifraga, *Briss.* 1. p. 437. 9.

L'Orfaie, ou Grand Aigle de Mer, *Buff. Ois.* vol. 1. p. 112. t. 3.—*Id.*
 Pl. Enl. 112. yearling Bird.—*Id.* 415. the figure of one from two to
 three years old.

Sea Eagle, *Br. Zool.* 1. No. 44. t. 17.—*Ib.* fol. t. 63.—*Zool.* 2. No. 86. A.
Will. (Ang.) p. 59. t. 1.—*Lath.* Syn. 1. p. 30.—*Id.* Sup. p. 9.—
Lewin's Br. Birds, 1. t. 1.—*Mont.* Ornith. Dict.—*Id.* Sup.—*Walc.*
Syn. 1. t. 2.—*Shaw's Zool.* 7. p. 81.—*Pult.* Cat. Dorset. p. 2.—*Don.*
Br. Birds, t. 105.—*Low's Fauna Orcad.* p. 32.—*Bewick's Br. Birds*,
 1. p. 11.

Syn. of
Young.

PROVINCIAL—Erne or White-tailed Eagle.

THE identity of the *Cinereous* and *Sea Eagle* is now so satisfactorily established, that I have, without any hesitation, brought the synonyms hitherto assigned to the two supposed species under the same head. To many, it may appear singular that this fact should only now be fully ascertained; but when we consider the great impediments to the investigation of the natural history of these birds, arising from the wild and mountainous districts they inhabit, the difficulty of procuring specimens, and the few opportunities afforded, therefore, of watching the progress of the young bird to maturity; the slow advance of our knowledge in regard to this, as well as other facts connected with this branch of science, will rather be a matter of regret than surprise. Many of our ornithological works, also, can only be regarded as compilations from the essays of earlier authors, in which the errors, arising from such deficiency of information as must naturally attend the infancy of a new pursuit, may be expected; and which errors have too often, without any attempt at further scrutiny, been faithfully transcribed.

The similarity in habits and manners, as well as in essential specific characters, between the *Cinereous* and *Sea Eagle*, first led me to suppose that they were of the same species, and that the difference of plumage might only proceed from the respective ages of the individuals, as appears

in many other instances. An opportunity having occurred of watching the progress of the young Sea Eagle from its earliest age, I eagerly availed myself of it, and witnessed the gradual and interesting changes it underwent, till it had finally acquired the plumage of the adult or Cinereous Eagle. During this process, I was happy to find, that my supposition had been anticipated, and the fact ascertained in France, by that eminent naturalist Mons. CUVIER*, as well as by Mons. TEMMINCK.

The Cinereous Eagle is more numerous than the preceding species, and is found in all the northern and mountainous maritime districts of Scotland and Ireland, and in the Orkney and Shetland Isles. It is also of a more roving disposition, and has frequently been killed in England.

MONTAGU† mentions several instances, and adds, that scarcely a year passes without some of these birds being seen in the New Forest in Hampshire. In Northumberland, the Cinereous Eagle has frequently been seen during the winter months. About six years ago, a fine specimen was killed at Chillingham Park, the seat of the Earl of TANKERVILLE; and two more in the winter of the following year, and both of these were in the state indicating immaturity. They appear to have resorted to this place from a facility of obtaining food, which the weak and fallen deer in a hard season liberally present.

In February 1828, two eagles of this species were killed upon the Northumbrian Coast; one near to Scremmerstone, and now in the possession of ROBERT WILKIE, Esq. of Ladythorn; the other at Holy Island, and now in my collection, having been kindly presented to me by JOHN DONALDSON, Esq. of Cheswick. They were both immature birds, apparently about two years and a half old, having undergone two moultings. The bird presented to me proved to be a

* CUVIER, Reg. Anim. tom. i. p. 35.; and TEMMINCK, tom. i. p. 49.

† MONTAGU, Ornith. Dict. Supplement, art. *Cinereous Eagle*.

female ; the sex of the other was not ascertained. It is probable, from being both of the same age, and killed within a few miles of each other, that they had belonged to the same eyry, and had continued associated from the time of quitting the nest.

In their native districts, they are generally seen near the sea-shores, or the precipices skirting the margins of inland lakes, as their favourite food consists of fish, which they pounce upon whilst swimming near the surface of the water ; or which they compel the Ospreys, after having captured them, to yield to their superior strength. Aquatic birds also become a frequent prey, as well as fawns and roe-bucks.—
Food. They generally breed in the most inaccessible cliffs, and lay but one, or at most two eggs, entirely white, and nearly the size of those of a goose. In my collection, is an egg laid by a bird of this species, after having been kept in a state of confinement for upwards of twenty years. The Cinereous Eagle possesses astonishing capability of enduring the cravings of hunger ; and instances are on record where it has shewn undiminished vigour, after fasting for four or five weeks. I am acquainted with an instance, in which the bird was permitted, through the inattention of its keeper, to be without food for several weeks, till its sufferings were so severe as to excite it to gnaw the flesh from the pinions of its own wings. In defect of living prey, this species readily feeds upon the dead carcasses of sheep and other animals, and is frequently caught in Scotland by the following device : “ A miniature-house, at least the wall part of it, is built on ground frequented by the eagle, and an opening left at the foot of the wall, sufficient for the egress of the bird. To the outside of this opening a bit of strong skeiny (cord) is fixed, with a noose formed on one end, and the other running through the noose. After all this operation is finished, a piece of carrion is thrown into the house, which the eagle finds out, and perches upon. It eats voraciously, and when fully satisfied it never thinks of taking its flight immediately

Nest, &c.

upwards, unless disturbed, provided it can find any easier way to get out of the house ; for it appears that it cannot readily begin its flight, but in an oblique direction ; consequently it walks deliberately out at the opening left for it, and the *skeiny* being fitly contrived, and placed for the purpose, catches hold of and fairly strangles it." This bird is of powerful form, but not so compact as the *Golden Eagle*. Its aspect is also heavier, and it has not the same alertness and activity. When reposing, it sits with drooping wings, and the feathers of the body ruffled in the manner of the *Vultures*, with which birds, indeed, it was at first classed by LINNÆUS ; a proof of the striking affinity it bears to that family. It is of wide distribution, species being found in all quarters of the globe.

The figure on PLATE 3. represents an adult female of this species, in about two-fifths of the natural size.

General description.

Adult bird.

Bill large, straight towards the base, colour straw-yellow, Cere wine-yellow. From the base of the bill to the eyes is a species of bluish-coloured skin, thinly covered with black hairs. Irides reddish-brown. Head and neck pale hair-brown, the feathers long, narrow, distinct, and acuminate. Upper parts dark hair-brown ; under parts the same, but deeper in tint. Upper tail-coverts white. Tail white. Quills blackish-brown, the shafts of the feathers pale. Legs feathered a short way below the knee, colour straw-yellow. The naked part of the Tarsi in front have large scales, or scutellæ. Middle toe with eight large scutellæ ; the outer with five ; and the inner and hind toes with four each. Claws black and strong ; very hooked, and sharp : the middle one with a sharp edged-groove on its inner side.

Young bird.

PLATE 3*. Represents the young of this species after the second moult, or in that state in which it has been named the *Sea Eagle* (*Falco ossifragus* of authors).

Bill bluish-black, paler towards the base. Cere wax-yellow. Irides pale chesnut-brown. Head and neck dark-brown, the tips of the feathers rather paler, the roots white. Upper parts reddish-brown, the feathers paler towards the base, and having the whole of their shafts dark. Under parts brown, of different shades, intermixed with a few white feathers. Quills brownish-black. Tail marbled with shades of hair and clove-brown, and darkest towards the end.

GENUS PANDION, SAVIG. OSPREY.

GENERIC CHARACTERS.

BILL rather short, strong, the culmen rounded, and broad; tomia of the upper mandible nearly straight, as far as the hooked tip. Nostrils oblong-oval, slightly oblique, and extending nearly the whole length of the cere. Wings long; the second and third quill-feathers the longest in each wing. Legs muscular and strong; the tarsi short, and covered with prominent retrinulated scales. Feet having the toes free, and nearly of equal length; the outer toe reversible, and all of them armed with strong, much curved, and very sharp claws, of which the under part is *rounded*. Claw of the exterior toe longer than that of the middle and inner ones. Under surface of the toes very rough, with small sharp-pointed scales.

The rounded under surface of the claws of this group is of itself a sufficient characteristic to separate it from the preceding, and other nearly allied genera; but in addition, they possess other distinctions in the form of the bill and legs, as well as in habits and general economy, of consequence enough to warrant such a removal. The Common Osprey (*Falco Haliæetus*, LINN.) stands as the type of the present genus, which contains two or three other species, one of which Pand. *Icthyæetus* of Dr HORSFIELD, approximates, in some respects, very closely to the genus *Haliæetus*, and forms the link of

connection between the two. The Ospreys are strictly piscivorous. They capture their prey by pouncing it when swimming near the surface, and are so fastidious as generally to refuse it, however fresh, unless taken alive by themselves. They possess a form and structure admirably adapted for the mode of living they pursue, their body being long and narrow, yet sufficiently compact and muscular ; their limbs powerful ; and feet furnished with toes and claws of such size and strength as to embrace a considerable surface, and take a very firm grasp of their slippery prey, and at the same time so constituted as to allow of that grasp being quickly withdrawn in case of danger, or from having attacked a fish too unwieldy to be raised from the water. Their plumage is also different in texture from that of the other Aquiline groups, being firmer and more closely set, particularly upon the lower parts of the body ; and the thighs are destitute of the long plumes that adorn the rest of the Falconidæ.

OSPREY.

PANDION HALIÆTUS, Savig.

PLATE IV.

Balbusardis Haliæetus, *Flem. Brit. Anim.* 1. 51. No. 15.

Falco Haliæetus, *Linn. I.* p. 129. 26.—*Fauna Suec.* No. 63.—*Lath. Ind. Ornith.* 1. p. 17. 30.—*Gmel. Syst.* 1. p. 263.—*Muller,* No. 66.—*Briss. I.* 1. p. 440. 10. t. 34.

Aquila Haliæetus, *Meyer, Tasschenb.* Deut. 1. p. 17.

Faleo arundinaceus, *Gmel. Syst.* 1. p. 263. var. B. a female in moult.

Morphnos seu Clanga, *Raii, Syn.* p. 7. 6.—*Will. Ang.* p. 63.

Le Balbusard, *Buff. Ois.* v. 1. p. 103. t. 2.—*Id. Pl. Enl.* 414.

Aigle Balbusard, *Temm. Man. d'Ornith.* 1. p. 47. 2d.

Flusadler, *Bechst. Tasschenb.* Deut. v. 1. p. 12.—*Meyer, Vög.* Deut. v. 2. Heft 23. a figure of the Male.

Osprey, *Br. Zool.* 1. No. 46.—*Id. fol.* p. 65. t. A. 1.—*Arct. Zool.* 2. No. 91. —*Lath. Ind. Syn.* 1. p. 45. 26.—*Id. Suppl.* p. 13.—*Lewin's Br. Birds,* 1. t. 5.—*Mont. Ornith. Dict.*—*Id. Sup.*—*Walc. Syn.* 1. t. 5.—*White's Hist. Selb.* p. 97.—*Bewick's Br. Birds,* 1. p. 13.—*Shaw's Zool.* 7. p. 82.—*Don. Br. Birds,* 3. t. 70.—*Pult. Cat. Dorset,* p. 2.

Carolina Osprey, *Lath. Syn.* 1. p. 46. 26. A.

Cayenne Osprey, *Lath. Syn.* 1. p. 47. 26. B.

PROVINCIAL,—Fishing Hawk, Fishing Eagle, Bald Buzzard.

According to MONTAGU, this species appears to be more abundant in Devonshire than in any other part of the kingdom. Its peculiar habits necessarily limit its appearance to particular districts and situations; for being strictly piscivorous, it is only in the vicinity of lakes, rivers, or such pools of water as abound with fish, that we can expect to meet with it. I have seen them upon Loch Lomond (where they are said to breed), and upon Loch Awe, where an eyry is annually established upon the ruins of a castle near the southern extremity of the lake; and another, in a similar situation, nearly opposite to the Gorge, or egress of the River Awe. The nests are, however, generally robbed when containing eggs; and the young are hardly ever permitted to escape. These circumstances will account for their decreasing numbers in Scotland. The Osprey is a powerful bird, the female often weighing upwards of five pounds.

Its limbs are very muscular, in proportion to its general dimensions, and measure nearly two inches in circumference below the knee.

The tarsi and feet are clothed with scales, and the under surfaces of the toes are very rough, and covered with protuberances,—an admirable provision for keeping firm hold of its slippery prey.—The peculiar formation of the foot contributes also greatly to this object; for in the Osprey, the talon of the outer toe is considerably larger than that of the inner one (the reverse of which we find in its congeners), and the toe itself is capable of being occasionally turned backwards. The thighs are covered with short feathers, closely set, and are totally destitute of the long plumes, which, in most instances, adorn the legs of the Falcon genus.

The plumage of the under parts of the body is also of a close and firm texture, and nearly resembles that of water-fowl. These peculiarities are in perfect accordance with the nature and habits of the individual; for, being subject to frequent and complete submersion in pursuit of its prey, the elongated thigh feathers would be only encumbering append-

dages ; and a more open and delicate texture of feather would prove no defence against the element it so often visits.

The general flight of the Osprey is heavy, and like the Common Buzzard, but at times it glides slowly along, with motionless wing. MONTAGU* observes, that when examining the water for its prey, its wings are in continual action, although it remains stationary for a considerable time. Its superior weight, he adds, may perhaps render it difficult to continue suspension with an almost imperceptible play of the wings, like the Kestrel. According to TEMMINCK†, it is found pretty generally disseminated throughout Europe, and is very abundant in Russia, Germany, and Switzerland. The Nest, &c.

Osprey builds in lofty trees or ruins, or amid rocks, as the situation may afford, and not, as WILLOUGHBY has mentioned, among the reeds in marshy grounds. It lays three or four yellowish-white eggs, blotched and speckled with reddish-brown.

The figure at PLATE 4. is that of a female bird of the natural size, and about two years old.

The male is rather smaller, but similar in plumage.

General description. Bill large, straightish at the base, and very hooked at the tip, of a bluish-black colour ; cere greyish-blue. Irides lemon-yellow. Crown of the head umber-brown, the feathers edged with white, long, slender, and acuminate ; hind part of the head and nape of neck white. On each side of the neck, proceeding from the posterior angle of the eye, and reaching almost as far as the shoulders, is a streak of blackish-brown. Throughout the throat, white, with a few brown streaks and speckles. On the upper part of the breast, a patch of umber-brown ; this is indicative of a young bird, the adults

* Article *Osprey*, in Supplement to Ornithological Dictionary, where some interesting facts are given relative to the history of this bird.

† Man. d'Ornith. 2d edit.

generally having that part immaculate. Belly, vent, thighs, and under tail-coverts, white.

The whole of the upper part of the body umber-brown, in some individuals the feathers margined paler. Two middle tail-feathers umber-brown, the rest transversely barred with white on their inner webs. Greater quills blackish-brown. Legs short, of a greyish-blue colour; the tarsi covered with rough reticulated scales. Toes armed with very long talons, which are cylindrical, being rounded beneath, and the outer one the largest.

SUB-FAMILY ACCIPITRINA.

Bill bending from the base, with a prominent lobe, or festoon, upon the cutting margin of the upper mandible. Wings short, and when closed not reaching beyond two-thirds of the length of the tail. The fourth quill-feather generally the longest in the wing. Legs rather slender and long.

The passage from the aquiline group is effected by certain species in which the wings become shortened, and the tarsi slender. To the Falcons the *Hawks* are nearly allied in habit; as their prey (consisting of birds and mammalia) is taken entirely upon wing; dead subjects and carrion being refused by them even when pressed by hunger. Their mode of attack on birds is, however, different, being generally in an oblique line, or in rapid evolutions, near the earth, and not by outsoaring and then pouncing down upon them from above. Their bill also wants the strength of that of the true falcons, the sides being more compressed; and instead of the marked tooth of the upper mandible, and the corresponding notch in the lower, it is only furnished with the marginal lobe or sinuation above mentioned. Their near affinity to the Buzzards (Sub-Family *Buteonina*) is supported by certain species of the latter, which approach in many

particulars to the genus *Astur*, containing the larger Accipitrine birds. *Buteo borealis* of Swainson may be cited as an example of this near relationship.

GENUS ASTUR, BECHST. GOSHAWK.

GENERIC CHARACTERS.

Bill short, bending from the base, with the sides rather compressed, and the upper mandible having a lobe or festoon upon its cutting margin. Nostrils oval, opening rather obliquely forwards. Wings short, and, when closed, scarcely reaching to one-half the length of the tail. The fourth quill-feather the longest in the wing, and the inner webs of the first five, deeply notched. Legs having the tibiæ and tarsi of mean length; the latter scutellated, or covered in front, with large broad scales. Toes of mean length; the middle toe much longer than the side one, which are nearly equal to each other. Hind toe strong; claws incurved, very strong, and sharp; those of the hind and inner fore toes much larger than the other two.

By BECHSTEIN, the title of *Astur* was applied to this whole sub-family, but it has since been confined to the larger species, which have the tarsi shorter in comparison to their size, and the scales that defend them rather differing in form and texture from those of the Sparrow-Hawks (genus *Accipiter*), to which, in other respects, both as to habits and form, they are closely allied. The Goshawks, though strong, are neither so compactly nor powerfully built as the true Falcons; and, from the shortness of the wings, their flight, when in active pursuit, is performed by quicker repeated strokes, and nearer to the ground. These birds, however move with singular rapidity, and in their evolutions are greatly assisted by the length and expanse of their tail. They feed entirely upon feathered and animal prey, frequently of much size, which they strike when in motion upon wing. They are

chiefly the inhabitants of wooded districts, and possess a wide geographical distribution.

GOSHAWK.

Astur palumbarius, Bechst.

PLATES XII. AND XII*.

Falco palumbarius, Linn. Syst. I. p. 130.—Gmel. Syst. I. p. 269. sp. 30.

—*Lath. Ind. Ornith. I. 29. sp. 65.—Meyer, Tasschenb. Deut. v. I. p. 49.*

—*Fauna Suec. No. 67.—Raii, Syn. p. 18. I.—Will. p. 5. t. 3. and 5.*

Astur, Briss. I. p. 317.—Ib. 8vo, p. 91.

L'Autour, Buff. Ois. I. p. 130.—Id. Pl. Enl. 418.—Temm. Man. d'Ornith. I. p. 55. 2d ed.

Hunderhabicht, Bechst. Tasschenb. Deut. v. I. p. 23.

Goshawk, Br. Zool. I. No. 52. t. 24.—Arct. Zool. 2. No. 99.—Lath. Syn.

1. p. 58.—*Id. Sup. p. 16.—Mont. Ornith. Dict.—Id. Suppl.—Albin. 2. t. 8.—Lewin's Br. Birds, I. t. 9.—Walc. Syn. I. t. 9.—Bewick's Br. Birds, I. p. 23.—Shaw's Zool. v. 7. p. 118.—Low's Fauna Orcad. p. 36.*

Synonyms of Adult.

Falco gallinarius, Gmel. Syst. I. p. 266. sp. 73.

Falco gentilis, Gmel. p. 270. sp. 13.—Lath. Ind. Ornith. I. p. 29. sp. 66.

L'Autour sors, Buff. Pl. Enl. pl. 461. and 423.

Greater Buzzard, Lath. Syn. v. p. 49.

Synonyms of Young.

This powerful species of Falcon is very rarely met with in England. I have never seen a recent specimen south of the Tweed. In the wild and mountainous districts of Scotland it is more common, and is known to breed in the forest of Rothiemurchus, and on the wooded banks of the Dee; and, according to Low, in his *Fauna Orcadensis*, is rather numerous in those islands (Orkneys), where it breeds in the rocks and sea-cliffs. Its flight is very rapid, but generally low, and it strikes its prey upon the wing. Different kinds of feathered Food. game, wild ducks, hares and rabbits form its principal food. According to MEYER, it will even prey upon the young of its own species. It generally builds in lofty fir trees, and Nest, &c. lays from two to four eggs, of a skim-milk white, marked with streaks and spots of reddish-brown.

By falconers, it was considered to be the best and most courageous of the short-winged hawks, and was accordingly

trained to the pursuit of grouse, pheasants, wild geese, herons, &c. Although it is nearly equal in size to the Jer-Falcon, yet the shortness of its wings, and its general contour, readily distinguish it from that species, in all its stages of plumage.

The Goshawk is very common in France, as well as in Germany, Switzerland, and Russia.

In Holland it is rare. The "*Falcon gentil*," from its description, must be referred to this species.

PLATE 12. Represents an adult male, in the natural size, drawn from a specimen in the possession of Sir WILLIAM JARDINE, Bart.

General description. Adult male bird.

Bill bluish-grey, darkest at the tip. Cere wax-yellow. Irides bright gamboge-yellow. Crown of the head dark clove-brown. Over the eye is a streak of white, mixed with clove-brown. Ear-coverts streak down the sides of the neck, and the whole of the upper parts, hair-brown; the quills being barred with a darker shade of the same. Tail hair-brown, with five distinct bars of blackish-brown; the tip being white. Chin and throat white, streaked with hair-brown. Under parts and thighs white, barred transversely with dark hair-brown.

Under tail-coverts white. Legs and toes wine or wax yellow. Front of the tarsi scutellated; the scales being well defined, and partly overlapping each other.

Claws black; those of the inner and hind toes very large, and much hooked.

PLATE 12*. A young male bird, of the natural size.

Young male bird.

Bill bluish-gray, dark towards the tip. Cere lemon-yellow. Irides grey. Above the eye, and passing to the occiput, is a streak of white, intermixed with a few brown specks. The crown of the head, and upper part of the neck, reddish-brown, the feathers margined with white. Upper part of the neck reddish-brown, the feathers mar-

gined with white. Upper parts of the body liver brown, the feathers margined paler. Under parts reddish-white, with long lanceolate streaks of blackish brown, occupying the centres of the feathers. Tail liver-brown, with four bars of blackish-brown; the tip white. Tarsi and toes lemon-yellow. Claws black.

White varieties of the Goshawk have been sometimes met with.

GENUS ACCIPITER, AUCT. SPARROW-HAWK.

GENERIC CHARACTERS.

Bill bending from the base, the sides compressed upwards, and forming a rather narrow rounded culmen. Cutting margin of the upper mandible with a very distinct obtuse lobe. Nostrils oval. Wings short; the fourth and fifth feathers longest; the first having the inner web alone notched, or sinuated; the next four with *both webs* emarginated. Legs with the tarsi long and slender, scutellated in front, with the scales thin and smooth, and closely united to each other. Feet having the toes slender, the middle one longer than the outer by *one* joint, and exceeding the inner by *two*. Hind and inner toes of equal length and strength, armed with very strong, hooked, and sharp claws, much longer than those upon the middle and outer toes.

The Sparrow-Hawks are chiefly distinguished from the birds of the preceding genus by their inferior size, and the greater comparative length and smoothness of their tarsi. In habits and mode of living, a great similarity exists; and though small, they are equally noted for their courage and audacity. In the various species that belong to the present genus, the difference of size between the male and female is more than usually marked, of which our own indigenous bird furnishes a striking example. By CUVIER, the gene-

ric term of *Nisus* was conferred upon the group; but, as the title of *Accipiter* had long been given to it, and adopted also by RAY and BRISSON, I have, in conformity with the rule generally advocated, retained the one sanctioned by priority of imposition.

SPARROW-HAWK.

ACCIPITER FRINGILLARIUS, Ray.

PLATES XIII. AND XIII^{*},

Accipiter Fringillarius, Raii, Syn. p. 18. A. 2.—*Will.* p. 51. t. 5.—*Shaw's Zool.* 13. 30.

Falco Nisus, Linn. Syst. 1. p. 131. 31.—*Fauna Suec.* No. 69.—*Gmel. Syst.* 1. p. 280. 31.—*Lath. Ind. Ornith.* 1. p. 44. 107.—*Meyer, Tasschenb. Deut.* 1. p. 25.—*Muller, No. 71.*

Buteo Nisus, Flem. Br. Anim. 1. 55. No. 24.

L'Epervier, Buff. Ois. v. 1. p. 225.—*Id. Pl. Enl.* 467. and 412.—*Temm. Man. d'Ornith.* 1. p. 56. 2.

Die Sperber, *Bechst. Tasschenb. Deut.* 1. p. 29.

Sparrow-Hawk, *Br. Zool.* 1. No. 62.—*Ib. fol. t. A. 10. A. 11.*—*Arct. Zool.* 2. p. 226. N.—*Lath. Syn.* 1. p. 99. 85.—*Ib. Suppl.* p. 26.—*Lewin's Br. Birds,* 1. t. 20.—*Haye's Br. Birds,* t. 3.—*Wil. (Ang.)* p. 86.—*Mont. Ornith. Dict.*—*Bewick's Br. Birds,* 1. 27.—*Shaw's Zool.* 7. 187.—*Low's Fau. Orcad.* p. 38.—*Pult. Cat. Dorset.*

This destructive and well known species is remarkable for the great difference in size between the male and female, the former seldom measuring twelve inches in length, whilst the latter often exceeds fifteen inches. It is one of the boldest of its genus, and the female, from her superior size, is a fatal enemy to partridges and other game, as well as pigeons.—It flies low, skimming over the ground with great swiftness, and pounces its prey upon the wing with unerring aim. The force of its stroke is such as generally to kill, and sometimes even to force out the entrails of its victim.

It is common in most parts of the kingdom, but particularly frequents the lower grounds, and well wooded inclosures.—It builds in low trees, or thorn bushes, forming a shallow and flat nest, composed of slender twigs, and very

Nest, &c.

similar to that of the Ring Dove, but rather larger. It will occasionally occupy the deserted nest of a Crow.

The eggs are from four to six in number, of a skim-milk white, blotched at the larger end with reddish brown. In the Orkney Islands, where it is abundant, it breeds in the rocks and sea cliffs. Mr Low, in his *Fauna Orcad.*, mentions a combat that he witnessed between the Sparrow-Hawk and the Short-eared Owl, and which terminated in the defeat of the latter. During the time these birds have young, the depredations they commit upon game, and the small feathered tribe, are very great. In a nest containing five young ones, *Food.* I found a Lapwing, two Blackbirds, a Thrush, and two Green Linnets, recently killed, and partly divested of their feathers.

The Sparrow-Hawk is very widely diffused, and found in all parts of Europe.

In the days of Falconry it was trained, and much approved in the pursuit of partridges, quails, and many other birds.

In rearing the young of this species, care should be taken to separate them very early, otherwise the female birds, being superior in size, and stronger, are sure to destroy and devour the males, as I have repeatedly found, when they were kept caged together.

PLATE 13. A female of the natural size. Bill bluish-grey, General
the tip black. Cere lemon-yellow. Irides gamboge-
yellow. Crown of the head and upper parts of the body blackish-grey, passing into clove-brown. Above the eye (which is defended by a large bony projection) is an indistinct line of white, which also encircles the nape of the neck. Under parts white, undulated with black or brownish-black bars. Quills greyish-black, the exterior webs with darker bars. Base and margin of the inner webs barred with white. Tail clove-brown, with broad brownish-black bars, the tip white. Legs and

descrip-
tion.
Female
bird.

toes long and slender, particularly the middle toe, colour gamboge, inclining to primrose-yellow. Claws black, hooked, and strong; those of the inner and hind toes being of equal size, and longer than the others.

Male bird. PLATE 13*. A male bird, also represented in the natural size, and shewing the singularly great difference in dimensions between the sexes.

Colour of the upper parts of the body (being an immature bird) clove-brown, the feathers edged with light reddish-brown. Under parts tinged with reddish-brown, and many of the undulating bars or transverse lines of the same hue.

The upper parts of the adult male are of a fine bluish-grey colour.

SUBFAMILY FALCONINA.

Bill thick, strong, short, bending suddenly from its base, and toothed. Wings long; the second quill-feather the longest in the wing. Tarsi short, strong, and reticulated. Toes armed with hooked and very sharp talons. The larger species are very courageous, and strong upon the wing, preying entirely on living birds and animals. Some of the smaller species are partly insectivorous.

GENUS FALCO, LINN. FALCON.

GENERIC CHARACTERS.

Bill short, very strong, curved from the base; the upper mandible armed on each side, near its point, with an acute tooth, which fits into a corresponding notch in the lower one, the tip of which is truncated. Cere very short. Nostrils

lateral, circular, and open, with a small, round, central column. Wings long, acuminate; the second feather generally the longest; and one or more of the first quills with the inner web strongly notched near the top. Legs having the tarsi rather short, strong, and reticulated. Feet with the middle toe united to the outer one at their base by a membrane, and exceeding it in length by a joint; the inner shorter than the outer toe. Hind toe short, armed, as well as the inner toe, with a strong, hooked, and very sharp talon, exceeding the others in length.

The birds of this genus, justly considered the typical form of the Falconidæ, as possessing the raptorial powers in the highest perfection, are distinguished from the other groups by their stronger bill, furnished with an acute tooth; their long and acuminate wings, vigorous power of flight, and peculiar mode of capturing their prey. From their docility, and susceptibility of being *reclaimed* (that is, trained to the purposes of falconry), they have been usually termed "the Noble Birds of prey," all the others coming under the designation of "Ignoble." The more powerful species prey upon the larger birds and animals; the former of which they capture upon wing, by outsoaring, and then darting down upon them with astonishing force and rapidity, the death-stroke being inflicted by their talons. Many of the smaller kinds, in addition to birds and the lesser animals, feed also upon insects, particularly those of the Coleopterous order. Their general form is robust yet compact, and their power of flight, from the full development of the wings, perhaps unequalled for swiftness and durability. It has, however, been remarked, that, from their shape, they experience a difficulty in rising vertically, and in calm weather they are compelled to make their ascent in an oblique direction. This genus contains a great number of species, spread throughout every part of the globe, and in all parts equally distinguished for their courage and predatory habits. Though at present the various species

are united under one head, it is probable that, when more thoroughly known, from having been subjected to analysis, it may be found necessary to subdivide the genus, which, indeed, in the case of the smaller American Falcons, has already been done by the Prince of Musignano, he having characterized these latter as a distinct group, with "wings shorter than the tail, and scutellated tarsi," which last character, however, as Mr Swainson has properly observed, is only partially correct.

JER-FALCON.

FALCO ISLANDICUS, Lath.

PLATE XIV.

- | | |
|-------------------------|---|
| Syn. of Adult. | <p>Faucon Gerfaut, <i>Temm. Man. d'Ornith.</i> 1. p. 17. <i>Falco Islandicus candicans, Lath. Ind. Ornith.</i> 1. p. 32. 69.—<i>Gmel. Syst.</i> 1. p. 275. sp. 101.—<i>Meyer, Tasschenb. Deut.</i> 1. sp. 65. <i>Falco Rusticolus, Gmel. Syst.</i> 1. p. 263. sp. 7. <i>Lath. Ind. Ornith.</i> v. 1. p. 28. 60. <i>Gerfaut de Norvége, Buff. Ois.</i> 1. p. 239.—<i>Id. Pl. Enl.</i> 462. <i>White Jer-Falcon, Lath. Syn.</i> 1. p. 83 and 84.—<i>Id. Supp.</i> p. 21.—<i>Br. Zool.</i> 1. No. 47. t. 19.—<i>Arct. Zool.</i> 2. p. 221. E.—<i>Lewin's Br. Birds,</i> 1. t. 26. <i>Gyrfalco candicans, Flem. Br. Anim.</i> 1, 51. No. 14.</p> |
| Syn. of Immature Birds. | <p><i>Falco Gyrfalco, Lath. Ind. Ornith.</i> 1. 32. 68. <i>Linn. Syst.</i> 1. p. 130.—<i>Gmel. Syst.</i> 1. p. 275. sp. 27. <i>Gyrfalco Islandicus, Briss.</i> 1. p. 373. A. t. 31.—<i>Id. 8vo.</i> p. 108.—<i>Muller, No. 73.</i> <i>Falco sacer, Gmel.</i> p. 273. sp. 93. <i>Le Gerfaut, Buff. Ois.</i> 1. p. 239. t. 13.—<i>Id. Pl. Enl.</i> 210 and 446. <i>Le Sacre, Buff. Ois.</i> 1. 246. t. 14. <i>Iceland Falcon, Arct. Zool.</i> 2. p. 216.—<i>Lath. Syn.</i> 1. 71. 5. B. <i>Jer-Falcon, Mont. Ornith. Dict.</i>—<i>Id. Supp.</i>—<i>Bewick's Br. Birds,</i> 1. p. 29.—<i>Low's Fauna Orcad.</i> p. 35. <i>Brown Jer-Falcon, Lath. Syn.</i> 1. p. 82. <i>Greenland Falcon, Arct. Zool.</i> 2. p. 220.</p> |

THIS is one of the most powerful, and at the same time one of the boldest of the whole genus.

As such, it was held in high estimation by the followers of that princely, but now neglected pastime we have before mentioned, and was used for flying at what were deemed the

"nobler flights" of game, such as cranes, herons, wild geese, &c.

According to "The Gentleman's Recreation" (an old but interesting treatise on hunting, hawking, and other field sports), this kind was difficult to *reclaim*; but, when once brought to obey the voice of the falconer, was of much greater value than any of the others.

The Jer-Falcon is of very rare occurrence in England; and I have never been able to examine a recent specimen on the south of the river Tweed.

It is known in the northern parts of Scotland, particularly in the Orkney and Shetland Isles, and is enumerated by Mr Low in his Fauna Orcad., but he appears to consider it as a visitant, not as a fixed inhabitant of those parts.

In Europe, Iceland, Greenland, and other northern countries, are the native regions of this species; and from the first of which it has obtained its trivial name. It was from this island, also, that the Royal falconries of Denmark and other kingdoms were supplied with their choicest casts of hawks. According to Dr Richardson*, the Jer-Falcon is a constant resident in the Hudson's Bay territories, where it is known by the name of the "Speckled Partridge Hawk," or by that of the "Winterer." He adds, it is not enumerated by Wilson or Bonaparte amongst the birds of the United States, and I am unable to give the exact southern limits of its range, though I have ascertained that it is occasionally found as far south as latitude 52°. It is found northward to the coast of the Arctic Sea; and probably in the most northern Georgian Islands." Its geographical distribution, therefore, seems limited to latitudes not lower than 50°.

It breeds in the highest and most inaccessible rocks; but the number and colour of the eggs remain as yet undescribed. During the period of incubation, and while rearing its young, it becomes very daring; as we learn from the following state-

* See Fauna Boreali Amer. vol. ii. page 27.

Food.

ment of the author above mentioned. "In the middle of June 1821, a pair of these birds attacked me, as I was climbing in the vicinity of their nest, which was built on a lofty precipice on the borders of Point Lake, in latitude $65\frac{1}{2}^{\circ}$. They flew in circles, uttering loud and harsh screams, and alternately stooping with such velocity, that their motion through the air produced a loud rushing noise. They struck their claws within an inch or two of my head. I endeavoured, by keeping the barrel of my gun close to my cheek, and suddenly elevating its muzzle when they were in the act of striking, to ascertain whether they had the power of instantaneously changing the direction of their rapid course; and found that they invariably rose above the obstacle with the quickness of thought, shewing equal acuteness of vision, and power of motion.—It preys upon the larger species of game and wild-fowl, also on hares and quadrupeds, upon which it precipitates itself with amazing rapidity and force.

Its usual mode of hawking is, if possible, to out-soar its prey, and thence to dart perpendicularly upon it.

PLATE 14. Represents a male of this species, of middle age, and in the natural size; drawn from a specimen in the valuable collection of JOSEPH SABINE, Esq.

General description.

Bill very strong and thick; with a well-marked tooth. Colour bluish-grey. Cere and orbits lemon-yellow. Irides reddish-brown. Head and neck white, with a few blackish-brown spots or streaks. Breast and belly white, slightly spotted in the same manner. Upper parts blackish-brown, the feathers spotted and margined with greyish-white, the bars of the feathers being also white. Tail banded, blackish-brown and white. Legs and toes yellow. Claws black. For a more particular description of the plumage, &c. at different periods of age, I refer my readers to the "Fauna Boreali Americana."

PEREGRINE FALCON.

FALCO PEREGRINUS, Linn.

PLATES XV. and XV*.

- Faucon Pelerin, *Temm. Man. d'Ornith.* v. 1. p. 22.
 Falco Peregrinus, *Lath. Ind. Ornith.* 1. 33. 72.—*Gmel. Syst.* 1. p. 272.—
Briss. 1. p. 341.—*Raii*, Syn. p. 13. 1.—*Flem. Br. Anim.* 1. 49. No. 10.—
Faun. Boreali Amer. 2. 23. No. 7.
 Falco Barbarus, *Lath. Ind. Ornith.* 1. 38. 71.—*Gmel. Syst.* 1. p. 272.
 Le Faucon Pelerin, *Buff. Ois.* 249. t. 16.
 Wander-Falke, *Bechst. Tasschenb.* p. 33.—*Meyer, Tasschenb. Deut.* 1.
 p. 55.
 Le Lanier, *Buff. Pl. Enl.* 430. Adult Male.
 Peregrine Falcon, *Br. Zool.* 1. No. 48. t. 8.—*Arct. Zool.* 2. No. 97.—*Lath.*
 Syn. 1. p. 73.—*Id. Supp.* p. 18.—*Lewin's Br. Birds,* 1. t. 12.—*Mont. Or-*
nith. Dict.—*Id. Supp.*—*Walc. Syn.* 1. t. 12.—*Shaw's Zool.* 7. p. 128.—
Bewick's Supp. Br. Birds.
 Tartarian Falcon, *Lath. Syn.* 1. p. 73. A.
 Spotted Falcon, *Lath. Syn.* 1. p. 68.—*Pult. Cat. Dorset,* p. 2.
 Barbary Falcon, *Will. (Ang.)* p. 81.—*Lath. Syn.* 1. p. 72.
 Great-footed Hawk, *Wils. Amer. Orn. ed. Sir W. Jardine,* 3. 251. pl. 76.
 fem.
 Falco communis, *Gmel.* 1. p. 270.—*Lath. Ind. Ornith.* 1. 30. t. 67.—*Briss.*
 1. p. 321.
 Falco Hornotinus, *Briss.* 1. p. 324. A.—*Gmel. Syst.* 1. p. 270.
 Faucon Sors, *Buff. Ois.* 1. t. 13.—*Id. Pl. Enl.* 470.
 Yearling Falcon, *Lath. Syn.* 1. p. 65.
 Falco gibbosus, *Briss.* 1. p. 324. B.—*Gmel. Syst.* 1. 270.
 Le Faucon Haggard, *Buff. Ois.* 1. 254.
 Haggard Falcon, *Will. Ang.* p. 88.—*Lath. Syn.* 1. p. 66.
 Black Falcon, *Lath. Syn.* 1. p. 67.—*Edw. t. 4.*
 Red Falcon, *Lath. Syn.* 1. p. 69.
 Red Indian Falcon, *Will. Ang.* p. 81. t. 9.—*Lath. Syn.* 1. p. 69.

Syn. of
Adult.Syn. of
Young

THE uncertainty in which the history of this species was long involved, appears to have arisen from the error of earlier writers, in considering the *Falco Peregrinus* and *Falco communis*, with its enumerated varieties, as two distinct species.

Deficiency of observation, and consequent want of an accurate knowledge of the various changes of plumage the bird undergoes in its progress to maturity, naturally led to this effect; and we accordingly find, that the bird hitherto described as the *Falco communis*, the type of the supposed species, and its varieties, must have been originally figured

from an immature specimen of the *Falco Peregrinus*, the species now under consideration.

By tracing the gradual advances, and noting the gradations of colour of this bird from a nestling to maturity, the several varieties of the supposed *F. communis* may also be connected, and the individuals brought back to the same line of descent, from the different synonyms under which they have been hitherto known.

Thus, the *Falco Hornotinus*, or Yearling Falcon, appears to be the young bird in its nestling or early plumage. The *Falco fuscus* I should consider as a bird of the same age, but a female.

Passing over the White-headed (*F. leucocephalus*) and White Falcon (*F. albus*), to be regarded only as accidental varieties, (though it might admit of a doubt, whether they are not links in the gradation of the change of plumage, which, let it be remembered, is regulated by certain and fixed laws), we come, in the next place, to the *Falco communis* of authors. At this period of its life, it has undergone a moult; and though a marked difference still exists between it and the old Peregrine Falcon, the advance towards maturity is sufficiently perceptible. The intermediate links in the chain upwards are supplied by the *F. gibbosus*, the *F. ruber indicus*, and the *F. maculatus*, which last shews the transition to the adult *F. Peregrinus**.

In England and Wales the Peregrine Falcon is rare, and is only found indigenous in rocky or mountainous districts. The Highlands and Northern Isles of Scotland appear to be the situations most favourable to it, and in that part of the kingdom it is numerous and widely diffused†. The most

* My own observations on this species have been confirmed and greatly assisted by an excellent paper, written by JAMES WILSON, Esq. entitled, "Observations on some species of the genus *Falco*," and published in the 2d volume of the Transactions of the Wernerian Society.

† In Dumfriesshire it breeds numerously in the precipices of the Moffat range of hills. See Sir WILLIAM JARDINE's Note on the *Great-footed Hawk*, in his edition of WILSON's Americ. Ornith. vol. iii. p. 251.

inaccessible situations are always selected for its eyry, and Nest, &c. its nest is placed upon the shelf of a rock. It lays four or five eggs, in colour very similar to those of the Kestrel, but considerably larger.

In America it has a very wide distribution, being found in both divisions of that continent, and in a great variety of latitude, as it changes its hunting grounds with the season. In summer its range extends to Hudson's Bay and Melville Peninsula, from whence specimens were brought by Captain PARRY, and where it preys chiefly upon the water-fowl, particularly the Long-tailed Duck (*Havelda glacialis*). Captain KING also met with it at Port Famine, in the Straits of Magellan; and the species appears to be the same in New Holland.

In daring disposition it equals most of its congeners, and many interesting traits in its history are related by different writers, amongst which, some in the Supplement to the Ornithological Dictionary will well reward the reader's attention*.

I may be allowed to add the following instance, as having happened under my own observation, and as exemplifying not only its determined perseverance in pursuit of its prey, when under the pressure of hunger, but as arguing also an unexpected degree of foresight.

In exercising my dogs upon the moors, previous to the commencement of the shooting season, I observed a large bird of the Hawk genus hovering at a distance, which, upon approaching, I knew to be a Peregrine Falcon. Its attention was now drawn towards the dogs, and it accompanied them, whilst they beat the surrounding ground. Upon their having found, and sprung a brood of grouse, the falcon immediately gave chase, and struck a young bird, before they had proceeded far upon wing. My shouts and rapid advance prevented it from securing its prey. The issue of this at-

* See MONTAGU, Suppl., under the head *Falcon Peregrine*.

tempt, however, did not deter the Falcon from watching our subsequent movements, and another opportunity soon offering, it again gave chase, and struck down two birds by two rapidly repeated blows, one of which it secured, and bore off in triumph.

The flight of this species, when pursuing its quarry, is astonishingly rapid, almost beyond credibility. By MONTAGU it has been reckoned at 150 miles in an hour.

Colonel THORNTON, an expert falconer, estimated the flight of a Falcon, in pursuit of a Snipe, to have been nine miles in eleven minutes, without including the frequent turns.

This sort was formerly much used in falconry, and was flown at the larger kinds of game, wild ducks and herons.

Food.

In its unreclaimed state it preys upon the different sorts of game, wild geese, wild ducks and pigeons.

PLATE 15. An adult female, in three-fourths of the natural size.

General description.

Adult Female.

Bill deep bluish-grey at the base, black towards the tip; very strong, and armed with a prominent tooth. Cere and space surrounding the eyes lemon-yellow. Irides brown. From the corners of the mouth is a bluish-black patch or streak pointing downwards. Head greyish-black. Upper parts of the plumage deep bluish-grey, marbled with a darker tint. Quills brownish-black, the inner webs barred with white; the first quill having a deep sinuation near the tip of the inner web. Tail-coverts bluish-grey, barred with greyish-black.

Tail barred alternately with black and grey, the tips of the feathers white. Throat and breast yellowish-white. Belly, vent and thighs greyish, transversely barred with greyish-black. Under wing-coverts white, barred with black; tarsi short and strong. Toes very long, particularly the middle one, colour gamboge-yellow. Claws black, hooked, and strong. The wings, when closed, reaching to the end of the tail.

PLATE 15*. Represents an immature bird, and of the size ^{Young}
of nature; indicating a change of plumage, by a few ^{Bird.}
grey feathers upon the back and scapulars. The crown
of the head, and upper parts blackish-brown, the occi-
put with a few white feathers. Chin and under part of
the neck white, with black streaks. Breast, belly, and
thighs white, with oblong cordated blackish-brown spots.
Tail barred with bluish-brown and black. Legs and
toes inclining to leek-green.

HOBBY.

FALCO SUBBUTEO, Linn.

PLATE XVI.

Falco subbuteo, Lath. Ind. Ornith. 1. p. 47. 114.—*Gmel.* Syst. 1. p. 283.—
Raii, Syn. p. 15. A. 14.
Dendro Falco, *Briss.* 1. p. 375. 20.—*Id.* 8vo. p. 109.—*Will.* p. 47.
Le Hobereau, *Buff. Ois.* 61. p. 277.—*Id.* Pl. Enl. 432.
Faucon Hobereau, *Temm.* Man. d'Ornith. 1. p. 25. 2 ed.
Faum-falke, *Bechst.* Tasschenb. Deut. 1. p. 36.
Hobby, *Br. Zool.* 1. No. 61.—*Arct. Zool.* 2. p. 227. C.—*Will.* (Ang.) p. 83.
—*Lewin's Br. Birds*, 1. t. 21.—*Lath.* Syn. 1. p. 103. 99.—*Ib. Supp.* p. 28.
—*Mont. Ornith. Dict.*—*Id. Sup.*—*Pult. Cat. Dorset.* p. 3.—*Don*, *Br. Birds*,
4. p. 91.—*Walc.* Syn. 1. t. 21.—*Bewick's Br. Birds*, 1. p. 41.—*Shaw's Zool.* v. 7. p. 193.

IN England, this species of Falcon is among the number ^{Periodical} of those birds that are named Polar Migrants, or summer ^{Visitant.} periodical visitants. It arrives in April, and after performing the offices of incubation, and of rearing its young, leaves us, for warmer latitudes, in October. I have not been able to trace it far northward, and believe that the boundary of its migration will include but a few of the southern and midland counties †.

Wooded and inclosed districts appear to be its usual haunts.

† It has been killed as far north as the Tyne; and a specimen shot at Streatham Castle, Durham, is now in the collection of the Messrs HANCOCK, at Newcastle-upon-Tyne.

It builds in lofty trees, but will sometimes save itself the task of constructing a nest, by taking possession of the deserted one of a Magpie or Crow. The number of its eggs is commonly four, of a bluish-white, with olive-green, or yellowish-brown blotches.

Food. Its favourite game is the Lark, but it preys upon all small birds. Partridges and Quails also become frequent victims to its courage and rapacity, in which qualities, diminutive as it is, it yields to none of its tribe.

Possessing a great length and power of wing, the flight of the Hobby is wonderfully rapid, and can be supported with undiminished vigour for a considerable time. I have often admired the adroitness displayed by one of this species, in pursuit of a Lark; the chase generally ending in the capture of the quarry, in spite of all its aerial revolutions and efforts to avoid the fatal blow.

When hawking was keenly followed, the Hobby was trained to the pursuit of young partridges, snipes, and larks. It is of elegant form, and resembles, in miniature, the Peregrine Falcon. The wings, when closed, reached beyond the end of the tail, in the specimens that have fallen under my inspection, though MONTAGU mentions them as being shorter.—According to TEMMINCK, it is common throughout Europe, during the summer months; but retires to warmer regions at the approach of winter. It is widely spread throughout Asia; and I have received specimens from the East Indies, in every respect similar to our own.

PLATE 16. Shews an adult male, of the natural size.

General description.

Bill bluish-black; strong; with the tooth prominent, and a slight sinuation posteriorly. Cere and eyelids yellow. Irides reddish-brown. Upper parts greyish-black, the margins of the feathers being a shade paler. A black patch or streak proceeds from the corners of the inferior mandible down each side of the neck. Chin and throat white. Breast and belly inclining to buff-orange, with

dark brown streaks. Thighs and under tail-coverts buff-orange. Quills black, the inner webs of the feathers having orange-brown spots. The first quill having a deep notch or sinuation on the inner web, about an inch from the tip; the second having the *outer* web obliquely sinuated, and being the longest in the wing; the first exceeding the third in length. Tail greyish-black, the outer feathers having yellowish-brown bars on their inner webs. Tarsi and toes yellow. Claws black.

ORANGE-LEGGED HOBBY.

FALCO RUFIPES, Bechst.

PLATE B.

Falco rufipes, Bechst, Tasschenb. Deut. 1. 39.—*Shaw's Zool,* 13. 39.
Falco vespertinus, Linn. Syst. 1. 129.—*Gmel. Syst.* 1. 282.

Lath. Ind. Orn. 2. 46. sp. 109. female.

Variété singulière de Hobereau, *Buff. Pl. Enl.* 431.

Faucon à pieds rouges, ou Hobez, *Temm. Man. d'Orn.* 2. 33.

Rothfüssiger Falk, *Meyer, Vög. Deut. Heft.* 18. m. f.

Ingrian Falcon, *Lath. Syn.* 1. 102. 88.—*Id. Sup.* 27.—*Lath. Gen. Hist.* 1. 122. No. 49.—*Shaw's Zool.* 7. 190.

Orange-legged Hobby, *Lath. Syn.* 2. 46.—*Id. Gen. Hist.* 1. 124, 51.

Red-footed Falcon, *Gould's Birds of Europe.*

SPECIMENS of this Falcon having been killed in Norfolk, Occasional Visitant. I now insert it in the list of our Fauna as an occasional visitant. In form and general appearance it bears a strong resemblance to the Hobby, though of smaller dimensions; possessing also the characteristic length of wing that distinguishes the typical forms of the genus. The wings, when closed, reach to the end of the tail, and are very sharp-pointed; the second feather is the longest, by about half an inch; and the first and third, in the specimen now before me, are of equal length. At one inch and a quarter from the tip, the first quill has its inner web (as in the Hobby) abruptly notched; of the second, the outer web alone is very obliquely sinuated. The tarsi (which are feathered in front

for more than one-third of their length) are reticulated, but shew three large scales at the bottom, and on a line with the middle toe, though not so broad or distinctly marked as those in the Merlin, the *Rusty-crowned Falcon*, or the Kestrels. This species preys upon Quails and small birds, and, like some of the other lesser Falcons, much upon the larger coleopterous insects. TEMMINCK, in his "Manual," mentions that MR MEYER found nothing but the remains of beetles in the stomachs of such as he dissected. It inhabits wooded districts, and is a common species in Russia, Poland, and Austria, reaching as far westward as the Tyrol and Switzerland; but in France, as in this country, it is of rare occurrence.

General description. The old male bird is described as having the head, neck, breast, and upper parts of the body, of an uniform blackish-grey; the abdomen and thighs reddish-brown; the cere, eye-orbits, and legs rich orange-red; and the claws yellowish, with darker points. The female is larger, and differs widely from the male in appearance, in the adult state; the head and nape of the neck are of an uniform pale reddish-brown, with a dark circle round the eye; the throat and cheeks white; the breast and abdomen tinged with pale reddish-brown, the shafts of the feathers being dark brown. Upper plumage deep bluish-grey, barred with greyish-black. Tail bluish-grey, with several bars of black, of which the one nearest the tip is the broadest. The young females, according to GOULD, have the head streaked with a darker colour.

PLATE B. The following is the description of the bird from which the figure upon the plate was taken, and which I conceive to be a female of the second year. Crown of the head, nape, and moustache, pale reddish-brown. Eye-orbits encircled by a patch of greyish-black. Fore-head, cheeks, and throat pale reddish-white. Lower part of the hind-neck, and adjoining the mantle, reddish-

brown, barred with greyish-black. Back, wing-coverts and scapulars deep bluish-grey, each feather being transversely barred with greyish-black. Quills with their outer webs and tips blackish-grey, the remainder of the inner webs having transverse oval white bars. Breast and belly pale reddish-brown, tinged with cinereous, the shaft of each feather and a small spot near the tip deep brown. Abdomen, thighs, and under tail-coverts pale buff, immaculate. Tail pale bluish-grey, with nine black bars; the one nearest the tip being double the breadth of the others. Legs and toes deep orange-yellow. Claws yellowish white, with darker ends. Outer toe scarcely exceeding the inner in length. Bill, cere, and basal part of the under mandible, yellow; the tooth and posterior situation distinctly marked; the sides convex, leaving a broad and rounded culmen.

KESTREL.

FALCO TINNUNCULUS, Linn.

PLATES XVII. and XVII*.

Falco Tinnunculus, Lath. Ind. Ornith. 1. p. 41. t. 98.—Gmel. Syst. 1. p. 278. 16.—Raii, Syn. Pl. 16. 16.—Will. p. 50. t. 5.—Meyer, Tasschenb. 1. p. 62.—Shaw's Zool. 7. 179.—Flem. Br. Anim. 1. 50. No. 13.

Falco Tinnunculus alaudarius, Gmel. p. 279.

Accipiter alaudarius, Briss. 1. p. 379. 22.

La Cresserelle, Buff. Ois. v. 1. p. 379.—Id. Pl. Enl. 401. old male, and 471. the young of the year.

Faucon Cresserelle, Temm. Man. d'Ornith. 1. p. 29.

Turm-falke, Bechst. Tasschenb. Deut. 1. p. 37.

Kestrel, Stannel, Windhover, Will. (Ang.) p. 84. t. 5.

Kestrel, Br. Zool. 1. No. 60.—Ib. fol. p. 68. t. A.—Arct. Zool. 2. p. 226. N.—Lath. Syn. 1. p. 94. 79.—Id. Supp. p. 25.—Lewin's Br. Birds, 1. t. 19.

Mand. F.—Mont. Ornith. Dict.—Walc. Syn. 1. t. 19.—Pult. Cat. Dorset.

p. 3.—Low's Fau. Orcad. p. 37.—Don, Br. Birds, 3. t. 51.—Shaw's Zool.

v. 7. p. 179.—Haye's Br. Birds, t. 4.—Bewick's Br. Birds, 1. p. 38. and

40. Mand. F.

PROVINCIAL—Kastril, Stonegall, Windhover.

THIS well-known species is distinguished, not only by the symmetry of its form and its elegant plumage, but by the

peculiar gracefulness of its flight, and the manner in which it frequently remains suspended in the air, fixed, as it were, to one spot, by a quivering play of the wings, scarcely perceptible. It is one of our commonest indigenous species, and is widely spread through the kingdom. Upon the approach of spring (or the period of incubation), it resorts to rocks and high cliffs.

Nest, &c. The nest consists of a few sticks loosely put together, and sometimes lined with a little hay or wool; and is placed in some crevice, or on a projecting shelf. I have known it, under the failure of more favourable situations, to breed in the deserted nest of a magpie or crow.

Food. The eggs are from four to six in number, of a reddish-brown colour, with darker blotches and variegations.—It preys upon the different species of mice, which it hunts for from the elevated station at which it usually soars, and upon which it pounces with the rapidity of an arrow. The castings of a nest of young Kestrels that I frequently inspected, consisted entirely of the fur and bones of mice; and MONTAGU remarks, that he never found the feathers or remains of birds in the stomach of this hawk. He therefore concluded, that it is only when it finds a difficulty in procuring its favourite food that it attacks and preys on the feathered tribes. That it will do so, under some circumstances, is evident, since bird-catchers have discovered the Kestrel in the very act of pouncing their bird-calls; and I have myself caught it in a trap baited with a bird.

In summer, the cockchafer supplies to this species an object of pursuit and food, and the following curious account given from an eye-witness of the fact. “I had,” says he, “the pleasure, this summer, of seeing the Kestrel engaged in an occupation entirely new to me, hawking after cockchafers late in the evening. I watched him through a glass, and saw him dart through a swarm of the insects, seize one in each claw, and eat them whilst flying. He returned to the

charge again and again. I ascertained it beyond a doubt, as I afterwards shot him *."

The Kestrel is easily reclaimed, and was formerly trained to the pursuit of larks, snipes, and young partridges.

It is a species, in point of geographical distribution, very widely spread, being found in all parts of Europe ; and specimens I have obtained from India seem to be in every respect the same, with the slight exception of the colours of the female bird usually appearing paler.

In form as well as habits, the Kestrels (as Sir Wm. JARDINE justly observes, in his edition of WILSON's American Ornithology) differ from the species previously described ; their wings being shorter, and the relative proportions of the feathers different. Their manner of *hovering*, and taking their prey by surprise, is also characteristic. To this subordinate group may be added the *Rusty-crowned Falcon* of the Fauna Boreali-Americana (the American Sparrow-Hawk of WILSON) ; whose habits seem to be intermediate between those of the Kestrel and Merlin ; and some others belonging to that country, which Prince CHARLES BONAPARTE has separated from the larger Falcons. At the extremity of this group the Merlin appears to hold its station ; whose habits, as well as the more rounded form of the wings, and the length of the toes, apparently lead back to the Sparrow-Hawks, or Accipitrine sub-family.

PLATE 17. A female bird, of the natural size.

The whole of the upper parts of the plumage are of a red-^{General} dish-orange, marked with numerous arrow-shaped black ^{Descript-} spots and bars. Tail having a broad black bar near ^{Female} the tip, which is white ; the upper part reddish-orange, ^{Bird.} barred with black. Breast, belly, and thighs, pale buff,

* In the above interesting communication, I must call my reader's attention to the fact of the bird eating the insects when upon wing ; a habit also seen, and much more constantly, in the genus *Elanus*, of which *Elanus furcatus* is the type.

streaked and spotted with brownish black. Quills brownish-black, margined with white; the two first having their inner webs deeply notched; the second and third with the outer webs strongly sinuated. The second quill rather longer than the third, which latter exceeds the first by more than half an inch.

The young male, for the first year, is very similar in plumage to the female bird.

PLATE 17*. An adult male of the natural size.

Male Bird. Bill bluish-grey at the base, with the tip black, strong, the sides convex, the tooth prominent, and the posterior undulation of the cutting edge well marked. Cere and naked space round the eyes lemon-yellow. Irides brown. Forehead yellowish-white. Crown of the head, nape of the neck, and part of the shoulders, light clove-brown, with the shafts of the feathers blackish-grey. Back and wing coverts reddish-orange, each feather having an arrow-shaped black spot near its tip. Rump bluish-grey; tail the same, with a broad black bar near the tip, which is white. From the corners of the mouth is a dark greyish-black streak, running beneath the eye, and pointing downwards. Throat and chin yellowish-white. Breast, belly, and thighs pale buff-orange, inclining to light reddish orange, with brownish-black spots. Quills black, with the margins and tips greyish-white, and the inner webs barred with reddish-white. Legs and feet saffron-yellow. Claws black.

MERLIN.

FALCO ÆSALON, Temm.

PLATES XVIII. AND XVIII*.

Falco Æsalon, Temm. Man. d'Ornith. I. p. 27.—*Shaw's Zool.* 7. p. 196.—
Flem. Br. Anim. I. 50. 14.—*Faun. Amer. Boreal.* 2. 37. No. 11. pl. 25.

Fauco Emerillon, Temm. Man. d'Ornith. I. p. 27.

Falco Litho-Falco, Lath. Ind. Ornith. I. 47. t. 115.—*Gmel. Syst.* I. p. 278.—
Briss. I. p. 349. 8.—*Raii,* Syn. p. 14. 8.

Falco cesioides, Meyer, Tasschenb. Deut. I. p. 60.

Le Rocier, Buff. Ois. v. I. p. 286.—*Id. Pl. Enl.* 447.

Stone Falcon, Lath. Syn. I. p. 93. 77.—*Mont. App. to Supp. of Ornith.* Dict.—*Shaw's Zool.* v. 7. p. 182.

Synonyms of
Adult Male.

Falco Æsalon, Gmel. Syst. I. p. 284. sp. 118.—*Lath. Ind. Ornith.* I. 49.
 t. 119.—*Raii,* Syn. p. 15. 15.—*Briss.* I. 382. 23.—*Will.* p. 50. t. 3.

L'Emerillon, Buff. Ois. Pl. Enl. 468, young male.

Merlin, Br. Zool. I. No. 63.—*Will. (Ang.)* p. 85. t. 7.—*Lewin's Br. Birds,* I. t. 22.—*Lath.* Syn. I. p. 106. 93.—*Id. Suppl.* p. 27.—*Mont. Ornith.* Dict.—*Pult. Cat. Dorset.* p. 3.—*Low's Faun. Orcad.* p. 39.—*Walc. Syn.* I. t. 22.—*Don, Br. Birds,* 4. t. 94.—*Bewick's Br. Birds,* I. t. 41.—*Shaw's Zool.* 7. p. 196.

Synonyms of
Female, and
immature
Males.

THE Merlin has generally been considered a winter or equatorial visitant, and to leave Great Britain at the approach of spring, for other and more northern climates. Repeated observation has, however, convinced me, that this opinion is incorrect; or, at least, that its migration is confined to the southern parts of the island.—It is certainly indigenous in Northumberland, and, I believe also, in parts of Cumberland and Westmoreland, as mentioned by Dr LATHAM. In the first named county, it resorts, during summer, to the extensive and upland moors, where it breeds, and where I have frequently met with its nest, which, in all the instances that have come under my notice, was placed upon the ground, amongst the heather, and not in trees, or in rocks, as TEMMINCK mentions in his "Manuel." The number of the eggs is from three to five; they are of a bluish-white colour, marked with brown spots, principally disposed at the larger end.

My readers will perceive, that, among the synonyms, I have included the *Stone Falcon* (*Faleo Lithofalco* of authors), as I feel convinced that it is the male Merlin in adult plumage; the two agreeing in every respect, except that the irides of this supposed species are stated by SONNINI, and other writers (who appear to have faithfully copied his description), to be yellow, and those of the Merlin are brown. But an objection raised upon the colour of the eyes is certainly not of sufficient import to authorise the establishment of a distinct species; for I know from experience, that the colour of the iris cannot always be depended upon as a specific character, having repeatedly found it to vary in the Marsh Harrier, and in the Peregrine Falcon. As a further proof that the Merlin also is subject to variation in the colour of the iris, I must state that two, among many nestlings that I have at different times attempted to rear, displayed a marked difference from the rest in the colour of the iris; and, had they lived to attain maturity, would, I may safely say, have shewn yellow irides, being similar to those of the young Sparrow-Hawk, or young Hen-Harrier, viz. of a yellowish-grey colour; but which, with maturity, become yellow. The trivial name of *stone falcon* is perfectly appropriate to the Merlin, as it is very often to be seen perched upon a large stone amid the wide wastes that it frequents during the summer months. As autumn approaches, the Merlin descends to the lower grounds, or migrates to the southern parts of the kingdom.

Inferior as this species is in size, it fully supports the character of its tribe; frequently attacking birds superior to itself in magnitude and weight, and has been known to kill a partridge at a single blow.—Like others, before enumerated, it became subjected to the purposes of pastime, and was trained to pursue partridges, snipes, and woodcocks. Its flight is low and rapid, and it is generally seen skimming along the sides of hedges in search of its prey. In witnessing its attack upon a flock of small birds, I have been astonished

at the rapidity of its evolutions, and the certainty of its aim, as it never failed in securing and bearing off its victim, even though chosen from the centre of the flock.

PLATE 18. represents the adult male in the natural size.

Bill bluish-grey, the tip black ; strong, with the sides convex, and the tooth prominent. Crown of the head, and upper parts of the body bluish, or pearl-grey ; the shafts of the feathers being black. Tail bluish-grey, with a broad black bar near the end, which is white. Chin white.

Inferior parts buff-orange, with oblong, drop-shaped, blackish-brown spots. Under surface of the interior webs of the quill-feathers barred with white. Cere, legs, and eye-orbits yellow. Irides generally brown.

PLATE 18*. A female bird. Natural size.

Crown of the head dusky brown, streaked with black. Nape of the neck, and streak over the eyes white, spotted with brown.

Female
bird.

Back and scapulars brown, tinged with grey ; the feathers edged, and spotted with reddish-brown. Quills brownish-black, spotted or barred with reddish-brown. The two first quills having their inner webs abruptly and very deeply notched ; the second and third with their outer webs strongly sinuated. The first quill rather shorter than the fourth, the second and third of equal length. Under wing-coverts brownish-orange, spotted with white. Throat white. Breast and under parts yellowish-white, with broad, oblong, brown streaks. Tail dusky, with seven or eight yellowish-white, or pale reddish-brown bars.

The young are similar in plumage to the female bird.

SUBFAMILY BUTEONINA.

Bill weak, bending immediately from the base. Wings long and ample; the first four feathers having their inner webs notched near the tips. First quill short; the third and fourth generally the longest. Thigh feathers long and pendant. Tarsi partly naked, or clothed with feathers. Plumage soft and downy. In disposition, the members of this subfamily are, for the most part, sluggish and inactive, and devoid of the courage that distinguishes the other species of the Falconidae. They pounce their prey upon the ground. In their affinities, they are nearly allied by some species (*Buteo borealis*, &c.) to the Goshawks (gen. *Astur*); and in the Harriers (gen. *Circus*), there is an evident approach to the owls in the radiated ruff surrounding the head.

GENUS BUTEO, BECHST. BUZZARD.

GENERIC CHARACTERS.

Bill rather weak, bending from the base; the cutting margin of the upper mandible slightly sinuated, and shewing an obtuse lobe; sides compressed, widening towards the base, where the culmen is broad and flat. Under mandible shallow, with the tip obliquely truncated. Cere large; nostrils rather pyriform, with the narrow end turning upwards and forwards. Wings long and ample; the first quill very short, and not exceeding the seventh in length; the second shorter than the fifth; the third and fourth the largest in the wing. The first four having their inner webs deeply notched; the third, fourth, and fifth with the outer webs obliquely sinuated. Legs with the tarsi short, naked, and scutellated in front, or feathered to the toes. Toes rather short; the front ones united at the base. Claws strong, but not much hooked.

The birds belonging to this genus are of large size, but generally of a heavy form and indolent aspect. Their plumage is soft, downy and loose, approaching in its texture to that of the *Owls*, which some of the species still further resemble in their partially crepuscular habits.* Their flight is easy and buoyant, but not remarkable for swiftness, and is generally in extensive circles. They prey upon the smaller birds and animals, as well as reptiles, for which they either watch, in sailing through the air, or (as is often the case) from some old tree or eminence, upon which they will remain perched for hours together. They strike their prey upon the ground, as they sweep over it, but make no attempt to capture it, when in motion, by active pursuit. In some species a close affinity to the *Goshawk* is perceptible, the proportion of the wings and form of the bill becoming more assimilated to those birds.

COMMON BUZZARD.

BUTEO VULGARIS, Bechst.

PLATE VI.

- Buteo vulgaris, *Flem.* Brit. Anim. 1. 54. No. 21.—*Shaw's Zool.* 13. 46.—
Faun. Amer. Boreal. 2. 47. pl. 27.
 Falco Buteo, *Linn. Syst.* 1. p. 127.—*Fauna Suec.* No. 60.—*Gmel. Syst.* 1.
 p. 265. sp. 15.—*Lath. Ind. Ornith.* 1. p. 23.—*Raii, Syn.* p. 16. A. 1.—
Will. p. 38. t. 6. i.—*Muller,* No. 64.—*Briss.* 1. p. 406.
 Falco communis fuscus, *Gmel. Syst.* p. 270. sp. 86.
 Falco variegatus, *Gmel. Syst.* 1. p. 267. sp. 78.—*Ind. Ornith.* 1. p. 24. 48.
 Falco absolutus? *Lath. Ind. Ornith.* 1. 28. sp. 61.
 La Buse, *Tenn. Man. d'Ornith.* 1. p. 63.—*Buff. Ois.* 1. p. 206. t. 8.—*Id.*
Pl. Enl. 419.
 Mause Falk, *Meyer, Vög. Deut. Heft.* 14.—*Frisch, Vög. Deut.* t. 74.
 Falco albidus, *Gmel. Syst.* 1. p. 267. sp. 49. white variety.
 Common Buzzard, *Br. Zool.* 1. No. 54. t. 25.—*Ib. fol. t. A. 3.*—*Arct. Zool.*
 p. 224. I.—*Will. (Ang.)* p. 70.—*Lath. Syn.* 1. p. 48.—*Id. Sup.* p. 14.—

* WILSON, when speaking of the *Buteo lagopus*, observes, "they are often seen coursing over the surface of the meadows, long after sunset, many times in pairs."—See *W.H.S. Amer. Orn. ed.* Sir W. Jardine, vol. ii. p. 54.

Mont. Ornith. Dict.—*Ib. Sup.*—*Lewin's Br. Birds*, 1. t. 6.—*Walc. Syn. 1. t. 6.*—*Shaw's Zool.* 7. p. 109. *Bewick's Br. Birds*. 1. 15.—*Pult. Cat. Dorset*, p. 3.
Falco Gallinarius, *Gmel. Syst.* p. 266.
 Ash-coloured Buzzard, *Arct. Zool.* 2. No. 103.—*Lath. 1.* p. 55.
Falco cinereus, *Gmel. Syst.* 1. p. 267.
 Greater Buzzard, *Lath. Syn.* 1. p. 49.
 Spotted Buzzard, *Lath. Syn.* 1. p. 49.
Buzzardet, *Penn. Arct. Zool.* 2. No. 109.
 Speckled Buzzard, *Lath. Syn.* 1. p. 97.
 Plain Falcon, *Arct. Zool.* 2. 104.

PROVINCIAL,—Puttock, Wood Buzzard.

THIS is a well-known species of Falcon, being of common occurrence in all the wooded districts of England. It is a heavy inactive bird, both in disposition and appearance, and is generally seen perched upon some old and decayed tree, such being its favourite haunt.

Its flight is slow, in extensive circles, and, except during the season of incubation, when it often soars to a considerable height, it seldom remains long on the wing.

Food. It preys upon leverets, rabbits, game, and small birds, all of which it pounces on the ground. It also devours moles and mice, and, when pressed by hunger, will feed on reptiles and insects.

Nest, &c. It breeds in woods, and forms its nest of sticks, lined with wool, hay, and other materials, and will sometimes occupy the deserted nest of a crow.

The eggs are two or three in number, larger than those of a hen, and are of a greenish-white, either plain, or spotted with reddish-brown. The young, according to PENNANT, remain in company with the parent birds for some time after having quitted the nest,—a circumstance at variance with the usual habits of birds of prey. It is common in all the wooded parts of Europe, and, according to TEMMINCK, very abundant in Holland. In France, this bird is killed during the winter for the sake of its flesh, which is esteemed delicious eating. Although previously unnoticed as a North American bird by WILSON and the PRINCE OF MUSIGNANO, it was met with by the Expeditions under Captain FRANK-

LIN; and found to extend as far north as the 57th parallel of Latitude. It is described, and beautifully figured, in the second volume of the *Fauna Boreali-Americanæ*. It is also an inhabitant of the Madeiras; from whence I have seen specimens, agreeing in every respect with our own.

The Buzzard is found to vary greatly in plumage, and has consequently been multiplied, by some ornithologists, into several species, as will appear by a reference to the synonyms. I have constantly endeavoured to verify the several varieties that have come under my examination, by comparison with the descriptions and figures given by different ornithological writers; and amongst the varieties that have thus occurred, I may enumerate the Ash-coloured Buzzard of LATHAM and EDWARDS *, and one of a uniform reddish-brown colour.

PLATE 6. Figure of the natural size.

Cere and irides lemon-yellow. Bill bluish-black; broad at the base, but much compressed towards the tip; with the cutting edge of the upper mandible distinctly sinuated. Crown of the head and upper parts of the body hair-brown, inclining to broccoli-brown, the margins of the feathers edged with yellowish-white and yellowish-brown. Chin and throat white, with a few brown streaks upon the shafts of the feathers. Breast yellowish-white, with oblong brown streaks, which upon the belly become small and arrow-shaped. First four primary quills deeply notched, the basal part of the inner webs white, with brownish-black bars; the rest of the quills, and the secondary ones, barred with shades of brown. Third, fourth, and fifth quills having their outer webs strongly sinuated. Sides and thighs dark clove-brown, the feathers edged with white and yellowish-brown. Tail square, with about twelve blackish-brown bars. Legs and toes yellow. The front of the

General descrip-
tion.

* Mr SWAINSON thinks that Mr EDWARD's bird refers to the *Gyrfalcon* in the young state, and has quoted it as such.

tarsi scutellated. The upper part of the toes reticulated. Toes short, united at the base by a membrane. Hind and inner toe each with four shield-shaped scales; outer toe with five; and the middle one with eight. Claws black, strong, but not much hooked; and very sharp.

ROUGH-LEGGED BUZZARD.

BUTEO LAGOPUS, Flem.

PLATE VII.

- Buteo Lagopus, *Shaw's Zool.* 13. 47.—*Flem.* Br. Anim. 2. 54. No. 22.—
Faun. Boreali-Amer. 2. 52. No. 16. pl. 28.
 Falco Lagopus, *Gmel. Syst.* 1. p. 260.—*Lath. Ind. Ornith.* 1. p. 19. 33.—
Meyer, Tasschenb. Deut. 1. p. 37.
 Falco Sclavonicus, *Lath. Ind. Ornith.* 1. p. 26. 54.
 Falco spadiceus, *Lath. Ind. Ornith.* 1. 27. sp. 57, but not the synonyms of
Philosoph. Trans.
 Buse Pattue, *Temm. Man. d'Ornith.* 1. p. 65.
 Buse Gantee, *Vail. Ois. d'Afr.* 1. pl. 18.
 Rauchfussiger Busard, *Bork. Deut. Orn. Heft.* female.
 Rough-legged Falcon, *Penn. Br. Zool. Appen.*—*Lath. Syn.* 1. p. 75.—
Shaw's Zool. 7. p. 145.—*Mont. Ornith. Dict.*—*Id. Suppl.*—*Bewick's Br. Birds, Suppl.*—*Wilson's Amer. Ornith. edit.* by *Sir W. Jardine*, 2. 54. pl. 33. f. 1.
 Dusky Falcon, *Penn. Arct. Zool.*
 Placentia Falcon, *Lath. Syn. Suppl.* 19. sp. 57.

In the Appendix to Pennant's British Zoology, a figure and short description are given of this bird, under the name of "the Rough-legged Falcon;" and in the Arctic Zoology of the same author, the bird described as the "Dusky Falcon" appears to be very safely referable to the same species. By many ornithologists the *Falco pennatus*, a bird belonging to the first or Aquiline section, has been confounded with this species, to which it bears a close resemblance, both in size and colour. It may, however, be readily distinguished by the form and size of its bill, and the uniform brown colour of the tail, which, in the bird now under description, is always more or less white at the base.

The Rough-legged Buzzard is a rare British species, and Occasional visitant. can only be considered as an occasional visitant.

MONTAGU mentions two or three instances of its having been taken in the south of England. In the winter of 1815, Northumberland was visited by some of these birds, and several opportunities were afforded me of inspecting both living and dead specimens.

Those which came under examination closely resembled each other as to colour and markings, though some individuals were darker along the belly than others; and the quantity of white upon the upper half of the tail was not always of equal breadth. Two of these birds, from having attached themselves to a neighbouring marsh, passed under my frequent observation.

Their flight was smooth, but slow, and not unlike that of the Common Buzzard, and they seldom continued for any length of time on the wing. They preyed upon wild ducks, Food. and other birds, which they pounced upon the ground; and it would appear that mice and frogs must have constituted a great part of their food, as the remains of both were found in the stomachs of those that were killed.

Since the above-mentioned year they have not been again seen in that neighbourhood.*

It is a native of Norway, and other northern countries of Europe, where it frequents marshy districts, preying upon leverets, hamsters, water-rats, moles, and frequently lizards and frogs. According to TEMMINCK, it builds in lofty trees, Nest, &c. and lays four white eggs, spotted with reddish-brown. In North America it is a common species, and possesses an extensive range, having been frequently seen in the districts

* Sir WILLIAM JARDINE, in his edition of WILSON's American Ornithology (in a Note appended to the "Rough-legged Falcon"), mentions several that have subsequently been killed in East Lothian, and other southern districts of Scotland. A fine specimen, shot near Alnwick, in March 1828, was also sent to me. Scarcely a year passes without the appearance of this bird upon the rabbit-warrens in Norfolk.

traversed by the Expeditions under Sir JOHN FRANKLIN, though, from its very shy character, only one specimen could be procured. Dr RICHARDSON informs us, that "a pair were seen at their nest, built of sticks, in a lofty tree, standing on a low, moist, alluvial point of land, almost encircled by a bend of the Saskatchewan. They sailed round the spot in a wide circle, occasionally settling on the top of a tree; but were too wary to allow us to come within gunshot." Its residence in the Fur Countries is not however permanent, as it retires southwards in October, to winter upon the banks of the Delaware and Schuylkill; returning again to the north early in spring.

The figure at PLATE 7. represents a female bird, of the natural size, killed in the winter of 1815, and now in my possession.

General description.

Bill bluish-black, darkest towards the tip; small and weak; bending rapidly from the base; the cutting margin of the upper mandible shewing only a faint sinuation. Commissure reaching rather beyond the anterior orbit of the eye. Cere and irides gamboge-yellow. Lores covered with small whitish feathers (shewing an approach to the genus *Pernis*), which are partly concealed by the bristly black hairs, disposed in a radiating form. Head, neck, and throat, yellowish-white, inclining to cream-colour, with slender streaks of umber-brown.

Breast yellowish-white, with large spots of umber-brown. Lower part of the belly umber-brown, forming a broad bend across that region. Thighs cream-yellow, with arrow-shaped brown spots; the feathers very long and soft. Tarsi covered with feathers, colour cream-yellow, with a few brown specks.

Back and wing coverts umber-brown, the edges of the feather paler. Lower part of the inner webs of the greater quill-feathers white. Quills notched and sinuated, as in the *Common Buzzard*. Upper tail-coverts and

base of the tail white, the remaining part brown, banded with a darker shade of the same colour. Toes saffron-yellow, short; the inner stronger, and as long as the outer one. Hind and inner toes each having four large scales; the outer five; the middle toe seven or eight. Claws black; long, but not much hooked.

GENUS PERNIS, *CUV.* HONEY-BUZZARD.

GENERIC CHARACTERS.

Bill slender, weak, bending gradually from the base to the tip; with the cutting margin nearly strait. Cere occupying half the length of the bill. Under mandible sloping gradually to the tip. Nostrils long, narrow, very obliquely placed in the cere, and opening forwards. Lores thickly clothed with small soft, tiled feathers. Wings long and ample; the first feather shorter than the sixth, and the third and fourth the largest in the wing. Inner webs of the first four notched, and the outer webs of the third, fourth and fifth sinuated. Tail long and slightly rounded. Legs having the tarsi half feathered; the lower, or naked part, being reticulated. Toes rather slender, the inner and outer ones of nearly equal length, the anterior joints of all scutellated. Claws weak, slightly hooked, with the inner edge of the middle one dilated.

This genus was first instituted by *CUVIER*, for the reception of the Common Honey-Buzzard and some other exotic species, distinguished from the other members of this subfamily, as well as from the rest of the *Falconidae*, by the comparative weakness of the bill and claws, and by the close-set scale-like feathers that cover the lores, or that space between the bill and eyes; which part in all the rest is nearly naked of feathers, but provided more or less with stiff bristles, generally disposed in a radiating form.

The nearest approach to this genus (and by which it becomes closely allied to the other Buzzards) appears to be *Buteo Lagopus*, where a covering of small downy feathers is visible beneath the projecting hairs. The habits of its members, as might be expected, are in unison with this modification or departure from the typical character of the family, being still less fierce and predatory; subsisting almost wholly upon insects (particularly those of the *Hymenopterous* and *Neuropterous* orders) and the smaller reptiles. Their form is lengthened and graceful, and, from the extent of their wings and tail, they fly with great buoyancy and ease. Their plumage partakes of the softness belonging to the other birds of this subfamily.

HONEY BUZZARD.

PERNIS APIVORUS, Cuv.

PLATE VIII.

- Pernis apivorus, *Cuv.* Reg. Anim. 1. 322.—*Flem.* Br. Anim. 1. 52. No. 17.—*Falco apivorus, Linn.* Syst. 1. sp. 130.—*Gmel.* Syst. 1. p. 267, sp. 28.—*Lath.* Ind. Ornith. 1. 25. 52.—*Briss.* 1. p. 410.—*Id.* 8vo, p. 117.—*Raii,* Syn. 16. 2.—*Muller,* No. 68.
Falco Poliorinchos, Bechst. Tasschenb. Deut. v. 1. p. 19.
Buse Bondrée, Temm. Man. d'Ornith. 1. p. 67. 2d ed.
La Bondrée, Buff. Ois. 1. p. 208.—*Id.* Pl. Enl. 420. a yearling bird.
Wespen Buzzard, Meyer, Tasschenb. Deut. 1. p. 39.—*Id.* Vög, Liv. und. Esthl. p. 12.
Honey Buzzard, Br. Zool. 1. No. 56.—*Id.* fol. 67. t. A. 4. and A. + 4.—*Arct. Zool.* 2. p. 224. I.—*Will.* (Ang.) p. 72.—*Lewin's Br. Birds,* i. t. 1.—*Lath.* Syn. 1. p. 52.—*Sup.* p. 14.—*Albin.* 1. t. 2.—*Mont.* Ornith. Dict. and Suppl.—*Pult.* Cat. Dorset.—*Walc.* Syn. i. t. 7.—*Bewick's Br. Birds,* 1. 17.—*White's Hist. Selb.* 1. t. 7.—*Shaw's Zool.* v. 7. p. 114.

PROVINCIAL,—Capped Buzzard.

Rare visi-
tant.

THIS rare and elegant species is easily to be distinguished from all its congeners, by the small, round, and closely-set feathers that cover the space between the bill and eyes, which space in the other species is either naked, or but thinly covered with bristles or hairs. This peculiarity has induced

CUVIER to separate the Honey Buzzard from the preceding genus, and to form of it and a few other foreign species, possessing the same character, his genus *Pernis*.

The instances of this bird being killed in England are but few. LATHAM says, that during such a number of years as he has been a collector, he has received but one fresh specimen. I have never met with it in a living state, nor been able to obtain it newly killed; and I am indebted for the figure in the present work to the polite attention of N. A. VIGORS, Esq. who kindly lent me, for that purpose, the very fine specimen he possesses *.

MONTAGU describes one, taken at High Clere in Berkshire (and now in the British Museum), that had the breast and belly of a light brown, barred with reddish-brown, which, according to that accurate ornithologist TEMMINCK, is characteristic of the female, or a young bird.

The young, during the first year, or previous to the first general moult, have the cere and iris brown, and the head spotted with white and brown.

The Honey Buzzard preys upon moles, mice, and small birds, and on lizards and insects, particularly wasps, bees, and their larvæ, which should appear to be their favourite food.

WILLOUGHBY describes a nest of this bird, in which he found the limbs of wasps, and fragments of the nymphæ in the stomachs of the young ones, whose craws contained also several lizards and frogs.

Its flight is easy and graceful, and it is frequently seen

* Since the publication of the first edition of this volume, a very fine male of this species was shot, in September 1829, in Thrunton Wood, Northumberland, by the keeper of the Hon. H. T. LIDDLE, of Eslington House; a description of which was published in the first volume of the Transactions of the Natural History Society of Northumberland, Durham, and Newcastle-upon-Tyne. Another beautiful variety, with white head and neck, was killed, in October 1831, at Cheswick, near Berwick on Tweed, and kindly presented to me by Mr DONALDSON. This bird is described in the 2d volume of the Transactions above mentioned.

near pieces of water, on account of the *Libellulæ*, and other aquatic insects.

Nest, &c. It breeds in lofty trees, forming a nest of twigs, lined with wool, and other soft materials.

The eggs are small, in proportion to the size of the bird, of a yellowish white, marked with numerous spots and stains of reddish-brown, sometimes so confluent as to make them appear almost entirely brown.

It is a native of eastern climes, and, according to TEMMINCK, is as rare in Holland as in England. In the south of France it is more abundant, but migratory.

PLATE 8. Figure of the natural size.

General description.

Bill bluish-black; slender, and weak; bending gradually from the base to the tip; with the commissure nearly straight. Cere greenish-grey. Irides yellow. The space between the eyes and bill covered with small, round, and closely-set feathers. Crown of the head clove-brown, tinged with bluish-grey. Upper parts umber-brown, more or less varied, and edged with clove and yellowish-brown. Throat yellowish-white, with a few brown streaks down the shafts of the feathers. Under parts yellowish-white, occasionally tinged with buff-orange; with bars and triangular spots of chesnut-brown. Tail long, umber-brown, with three blackish-brown bars. Feet and tarsi yellow, reticulated, and feathered a little below the knee. Claws black, and not much hooked.

GENUS CIRCUS, BECHST. HARRIER.

GENERIC CHARACTERS.

Bill bending from the base, weak, much compressed, and forming a narrow rounded culmen; the tomia of the upper mandible exhibiting a very small festoon or sinuation near

the middle of the bill. Under mandible shallow, and rounded at the point. Nostrils rather large, broadly oval, and nearly concealed by the reflected and upward-curving hairs of the lores. Head surrounded by a ruff of stiffish tailed feathers. Wings long, with the fourth feather scarcely exceeding the third, but being the longest in the wing; first four having their inner webs notched; the third, fourth, and fifth, with the outer webs, sinuated. Tail long, and slightly rounded. Legs with the tarsi long and slender, feathered in front for a short distance below the joints, with the naked part scutellated. Toes of mean length, and rather slender; middle toe the longest; the outer rather exceeding the inner, and joined at the base to the middle one by a membrane; third toe shortest. Claws moderately incurved, and very sharp; those of the inner and hind toes the largest.

The birds of this genus are distinguished from the more typical Buzzards, by their prolonged and slender form, their lengthened tarsi, and the distinct ruff of close-set feathers, which, as in the *Owls*, surrounds the face. In their habits they are more active than the other birds of this subfamily; and their flight, though not remarkable for swiftness, is light and buoyant, and can be supported for a long time (though generally at no great elevation) in search of their prey, consisting of birds, small mammalia, and reptiles, all of which they pounce on the ground. In the form of the bill, the reflected bristles of the lores, and the peculiar ruff surrounding the face, they shew a decided affinity to the succeeding family of *Strigidæ*, particularly to the birds of that group which, from their habit of hawking in the day-time, have obtained the name of *Accipitrine Owls*.

MARSH HARRIER.

CIRCUS RUFUS, Briss.

PLATE IX.

Syn. of
Adult.

- { *Circus aeruginosus, Shaw's Zool.* 13. 41.
Buteo aeruginosus, Flem. Br. Anim. 1. 55. 25.
Falco rufus, Lath. Ind. Ornith. v. 1. p. 25. 51.—*Gmel. Syst.* 1. p. 266. 77.
Circus rufus, Briss. Ornith. v. 1. p. 404.
Circus palustris, Briss. 1. p. 401.
La Harpaye, Buff. Ois. v. 1. p. 217.—*Id. Pl. Enl.* 460.
Busard Harpaye, ou de Marais, Temm. Man. d'Ornith. 1. 69. 2d ed.
Brandweih, Bechst. Tasschenb. Deut. p. 24. sp. 19.
Harpy Falcon, Lath. Syn. 1. p. 51.

Falco aeruginosus, Linn. 1. p. 130.—*Fauna Suec.* No. 66.—*Gmel. Syst.*
 1. p. 267.—*Lath. Ind. Ornith.* 1. 25. 53.—*Raii Syn.* p. 17. A. 4.—
Muller, No. 69.
Falco arundinaceus, Bechst. Naturg. Deut. v. 1. p. 681. 19.
Le Busard de marais, Buff. Ois. 1. p. 218.—*Id. Pl. Enl.* 424. a yearling
 bird.
Sumpfweih, Meyer, Taschenb. Deut. v. 1. p. 43.
Moor Buzzard, Br. Zool. 1. No. 57. t. 27.—*Id. fol.* p. 67. t. A. 5.—*Arct. Zool.* 2. p. 225. L.—*Lath. Syn.* 1. p. 53.—*Id. Suppl.* 15.—*Mont. Ornith. Dict.* 2 vol.—*Will. (Ang.)* p. 75. t. 7.—*Lewin's Br. Birds,* 1. t. 8.—*Walc. Syn.* 1. t. 8.—*Pult. Cat. Dorset.* p. 3.—*Bewick's Br. Bird,* 1. 19-.

PROVINCIAL,—Duck Hawk, White-headed Harpy, Moor Buzzard.

General
descrip-
tion.
Female
bird.

THE female bird of this species, which is represented on Plate 9, measures twenty-three inches in length, and in breadth, with extended wings, four feet five inches. The bill is bluish-black. The cutting edge of the upper mandible has a very slight festoon. Cere lemon-yellow. nostrils covered with the upturned bristles of the front part of the lores. Irides blackish-brown. Crown of the head, throat, and cheeks, straw-yellow, streaked with brown. Behind the ear-coverts, and surrounding the neck, is a ruff of stiffish feathers. Upon the ridge of the wing, a patch of straw-yellow. The rest of the body of dark umber-brown, passing upon the belly into reddish-brown. Legs long, the tarsi slender, and, together with the toes, yellow. Claws black.

Male bird. The male, taken at the same time, is rather inferior in size, and of an uniform umber-brown colour, with the exception

of a small spot of the straw-yellow upon the occiput. And in him the irides are yellow.

The young differ from the adult birds in being without the straw-yellow upon the head or wing-coverts. Varieties of this species, with more or less white, are also frequently found.

I kept one of these birds in confinement for some years, in which the throat, bastard-wing, the first four quill-feathers, and the outer tail-feathers, were of a pure white. The rest of its plumage was of dark umber-brown.

Marshy districts and moors are the favourite haunts of *Food.* this species. They prey on wild ducks and other water-fowl, young game, leverets, and water rats. Lizards and frogs also form a great portion of their food; and they will sometimes take perch, and other kinds of fish.

Their flight is slow, and generally near the ground, beating it with great regularity in search of their prey; but during the season of incubation, the males will soar to a considerable height, and remain suspended in the air for a long interval of time. They build in the tall tufts of grass or rushes which grow in marshy places, and lay four or five round eggs, entirely white; and not spotted with brown, as asserted in the *Index Ornithologicus* of *LATHAM.*

These birds abound in all the marshy districts of England and Scotland, and, according to *MONTAGU*, are very numerous in Wales, where they prey upon the rabbits that inhabit the sand-banks of the shores of Caermarthenshire. The same writer observes, that he has seen no less than nine feeding together upon the carcass of a sheep.

In Holland they are of course numerous, from the nature of the country; and rare in Switzerland.

They are migratory upon the Continent, but remain with us the whole year.

The affinity between this species and the Hen Harrier, is shewn in the general contour of the form, the length of the tarsi, and in the similarity also of their habits and manners.

HEN HARRIER.

CIRCUS CYANEUS, Flem.

PLATE X.

Male and
Female.

- Circus cyaneus, Flem. Br. Anim. 1. 53. 20.*
*Falco cyaneus, Mont. Trans. Linn. Soc. v. 9. p. 182.—Meyer, Taschenb.
 Deut. v. 1. p. 182.*
- Falco cyaneus, Gmel. Syst. 1. p. 276.—Linn. Syst. 1. p. 126. 10.—Lath.
 Ind. Ornith. 1. 39. 94.—Muller, No. 74.*
Falco torquatus (mas.), Briss. Ornith. 1. p. 345.—Ib. 8vo, p. 100.
*Falco Bohemicus, Gmel. Syst. 1. p. 299. sp. 107.—Falco albicans, Id.
 p. 276. sp. 102.*
Falco griseus, Gmel. p. 275. sp. 100.—Lath. Ind. Ornith. 1. p. 37, 86.
Falco montanus, Gmel. 1. p. 278. sp. 106. var. B.
Lanarius cinereus, Briss. 1. p. 365. 17.—Id. 8vo. p. 106.
L'Oiseau St Martin, Buff. Ois. v. 1. p. 212.—Id. Pl. Enl. 459.
Busard St Martin, Temm. Man. d'Ornith. 1. p. 72.
Busard à croupion blanc, Vail. Ois. d'Afriq. Sept. v. 1. Pl. 8.
Kore oder Halbweiche, Bechst. Tasch. Deut. p. 25. sp. 20.
*Hen Harrier, Brit. Zool. 1. No. 58. t. 28.—Will. (Angl.) p. 72.—Albin,
 2. t. 5.—Lath. Syn. v. 1. p. 88.—Id. Suppl. p. 22.—Lewin's Birds, 1.
 t. 18.—Hayes' Br. Birds.—Mont. Ornith. Dict. v. 1.—Id. Suppl.—
 Walc. Syn. t. 17.—Bewick's Br. Birds, 1. p. 33.—Pult. Cat. Dorset.
 p. 3.—Don. Br. Birds, 3. t. 59.—Low's Fau. Orcad. p. 37.—Shaw's
 Zool. 7. p. 163.*
New York Falcon, Penn. Arct. Zool. 2. p. 209.
- Falco Pygargus, Linn. 1. p. 126. 11.—Gmel. Syst. 1. p. 277. sp. 11.—
 Lath. Ind. Ornith. 1. p. 39. 94.—Raii Syn. p. 17. 5. (fem.)—Muller,
 No. 74.—Will. p. 40.*
Falco Hudsonii et Buffonii, Gmel. 2. p. 277. sp. 19. and 103.
Falco rubiginosus, Lath. Ind. Ornith. 1. p. 27. sp. 56.
Falco torquatus (fem.), Briss. 1. p. 345. 7.—Ib. 8vo, p. 100.
*La Soubuse, Buff. Ois. v. 1. p. 215. t. 9.—Id. Pl. Enl. 443. young female,
 and 480, young male.*
Le Busard Grenouillard, Vail. Ois. d'Afriq. 1. Pl. 23.
*Ring-tail, Br. Zool. 1. No. 59.—Id. fol. p. 68. t. A. 7.—Lath. Syn. 1.
 p. 89. 95.—Id. Supp. p. 22.—Mont. Ornith. Dict.—Id. Sup.—Lewin's
 Brit. Birds, 1. t. 18.—Will. (Ang.) p. 72.—Walc. Syn. 1. t. 18.—
 Bewick's Br. Birds, 1. p. 35.—Shaw's Zool. 7. p. 163.*
Ring-tail Hawk, Edwards, t. 107.—Arct. Zool. 2. No. 106.
White-rumped Bay Falcon, Lath. Syn. 1. p. 54.
Hudson's Bay Ring-tail, Lath. Syn. 1. p. 91. 76.
Cayenne Ring-tail, Lath. Syn. 1. p. 91.
*Marsh Hawk, Wils. Amer. Orn. ed. by Sir Wm. Jardine, 2. 272. pl. 51.
 fig. 2.*

Syn. of Adult
and middle-
aged Male.Syn. of Fe-
male and
Young.

THE above long list of synonyms arises from this bird having been considered by many ornithological writers as two distinct species,—a mistake doubtless occasioned by the very

dissimilar appearance of the sexes in the adult state, with respect to size and colour. The facts, however, adduced by MONTAGU *, to prove the identity of the two, are clear and satisfactory; to me particularly so, as the result of my own observations lead entirely to the same opinion. Mons. TEMMINCK, also, in his valuable "Manuel," has shewn so little doubt upon the subject, as at once to bring the synonyms of the Hen Harrier and Ring-tail together.

The species, though not very numerous, is pretty generally found throughout Britain, frequenting low marshy situations, or wide moors. The flight of the Hen Harrier is always low, but at the same time smooth and buoyant, beating its hunting grounds with great regularity, and at stated intervals. It is very destructive to game, which it pounces upon the ground; it also feeds upon small birds and animals, lizards and frogs. It breeds on the open wastes, and frequently in thick furze covers; the nest is placed on the ground, and the eggs are four or five in number, of a skim-milk white, round at each end, and nearly as large as the Marsh Harrier†.

The young males, for the first year, are similar in appearance to the females, after which they gradually assume the grey plumage that distinguishes the adult.

It is common in France, Germany, and Holland, inhabiting the low and flat districts; but in Switzerland, and all mountainous countries, it is of rare occurrence‡.

PLATE 10. Fig. 1. Shews the male bird, in perfect plumage, and of the natural size.

* See Supplement to Ornith. Dict. article *Hen Harrier*.

† I refer my readers to some very interesting particulars respecting the habits and economy of this species, detailed at considerable length by Sir William Jardine, in a note to his valuable edition of Wilson's American Ornithology.

‡ Some doubts still remain as to the identity of our own and the American species.

General
descrip-
tion.

Male bird.

Bill bluish-black. Cere wax-yellow, almost hidden by the projecting bristles at the base of the bill. Irides king's-yellow. Head, neck, upper part of the breast, back, scapulars, and wing-coverts, bluish-grey, passing into pearl-grey. The rump white. Quills black. Breast, belly, under wing and tail-coverts, pure white, without any *spots* or *streaks*, as in the Ash-coloured Harrier. Middle tail-feathers grey; the outer ones having their inner webs white, barred with blackish-grey. Legs and toes lemon-yellow.

Fig. 2. The female.

Female.

The space surrounding the orbits of the eyes white. Crown of the head and ear-coverts umber-brown. The ruff composed of stiff white feathers, with brown shafts. Upper parts umber-brown, more or less varied with yellowish or reddish-brown. Quills dusky, barred underneath with white. Breast, belly and thighs yellowish-white, with long streaks of deep orange-brown. Rump white. Tail barred with clove and umber-brown. Legs yellow.

ASH-COLOURED HARRIER.

CIRCUS CINERACEUS, *Shaw*.

PLATE XI.

Circus cineraceus, *Shaw's Zool.* 13. 41. sp. 3.

Buteo cineraceus, *Flem. Br. Anim.* 1. 55. No. 26.

Falco cineraceus, *Mont. Ornith. Dict.*—*Id. Suppl.*—*Trans. Lin. Soc.* 9. p. 188.

Busard Montagu, *Temm. Man. d'Ornith.* 1. p. 86.

Die Halbweihe, *Naum Vog.* 4. p. 180. t. 21. p. 33.

Ash-coloured Falcon, *Montagu, Ornith. Dict.*—*Id. Suppl.*

The British Fauna is indebted to the persevering researches and acute discrimination of our countryman MONTAGU for

the discovery of this new species of falcon, the description of which he has most accurately given in the Supplement* to the work I am so often proud to quote. The resemblance it bears to the Hen Harrier was without doubt the cause of its remaining so long unnoticed as a separate species, having in all probability, when previously met with, been considered only as a variety of that bird.

The specific distinctions are, however, when subjected to the test of strict examination, obvious and well defined.

The leading points of difference are the following.

Though greatly inferior in weight, it exceeds the Hen Harrier considerably in dimensions, both as to length and extent of wing.

The third quill-feather is much longer than any of the others, and its wings, when closed, reach beyond the extremity of the tail; whereas in the *Circus cyaneus*, they are shorter than the tail by two inches. The colour of the under wing-coverts, the belly, and thighs, is also very different. The ruff which encircles the back part of the head, and neck of the Hen Harrier, is not so distinctly marked in this species. The general contour and appearance of the two birds will be found, on comparison, to be very different. A close attention to the respective descriptions will also discover other minor traits of separation.

The Ash-coloured Harrier is far from being numerous in England. I have taken it in Northumberland, where it breeds upon the moors or open lands.

It skims along the surface of the ground, like the Hen Harrier, but with more rapid flight, and more strikingly buoyant. Lives upon small birds, lizards, frogs, &c. Its Food. nest is placed upon the ground, amongst furze or low brush-
wood. The eggs are generally four, and of a pure white.

According to TEMMINCK, it is found throughout Hungary, in Poland, Silesia, and Austria. It is common also in Dalmatia and the Illyrian Provinces, but is of rare occurrence in Italy.

* See article *Ash-coloured Falcon*.

PLATE 11. A male bird, of adult age, and of natural size.

Killed near Morpeth in Northumberland in 1817.

General
descrip-
tion.
Male bird.

Bill bluish-black. Cere lemon-yellow. Irides yellow. Head and upper parts of the body deep ash-grey, the tips and middle parts of most of the feathers blackish-grey. Throat and breast deep ash-grey. Belly, sides, and thighs, white, with reddish-brown streaks. Under wing-coverts barred with reddish-brown. Primary quills black; secondaries ash-grey above, beneath paler, with three blackish bars, one of which is visible on the outer side of the wing. Tail long, the two middle feathers grey, with a tinge of brown; the rest grey on the outer web, the inner having five reddish-brown bars. Legs slender and yellow. Toes short, the claws black.

Since the above-mentioned year, I have killed two male specimens of this bird, both of which answered the foregoing description.

Female.

Bill bluish-black. Cere wax-yellow. Irides bright yellow, Crown of the head reddish-brown, with blackish-brown spots. Nape of the neck varied with orange-brown and white. Above and below the eye, is a streak of pale reddish-white. Ear-coverts deep umber-brown. Upper parts of the body umber-brown, the feathers margined with pale orange-brown. Lower part of the rump and the tail-coverts white, streaked with pale orange-brown. The whole of the under parts orange-brown, without *spot* or *streak*. Tail, having the two middle feathers nearly of an uniform brown, the rest being barred with pale orange-brown and umber-brown, except the outer feathers, which are barred with orange-brown and white.

The young males, previous to the first moult, are similar in plumage to the female bird.

SUBFAMILY MILVINA.

Bill of moderate strength, nearly strait at the base. Feathers upon the head and neck, narrow and acuminate. Nostrils placed rather obliquely. Wings very long; the first quill-feather short. Tarsi scaled, short, feathered for a short space below the knee. Tail more or less forked. Prey pounced upon the ground, or, when consisting of insects, caught in the air. Flight very buoyant, with little exertion of the wings, and in wide circles.

GENUS MILVUS, *AUCT.* KITE.

GENERIC CHARACTERS.

Bill of moderate strength, nearly strait at the base; rapidly incurved in front of the cere to the tip, which forms an acute hook. Culmen subangular. Cutting margin of the upper mandible with a shallow lobe or festoon between the line of the nostrils and the tip. Upper mandible rounded at the tip. Cere short; nostrils oval; rather obliquely placed in the cere. Feathers of the head and neck acuminate. Wings very long; the first feather short, more so than the seventh; the fourth the longest of all; the first five having their inner webs notched; the second, third, fourth, and fifth, with the outer ones, the same. Tail long, more or less forked. Legs with the tarsi very short; feathered below the joint; the naked frontal part scutellated. Toes rather short, and strong, the outer united at its base to the middle one. Claws long and strong, moderately incurved, with the inner edge of the middle one thin and dilated.

The birds of this genus are distinguished for their graceful and easy flight, which is performed by little exertion of

their pinions, in extensive circles, and in which they are guided by the elongated and forked form of their tail. To the preceding genera of the Buzzards they shew a strong affinity, both in form and habits, though their forked tail, and greater development of wing, are sufficient characteristics of separation. In shape of bill, and other particulars, they approach to some of the earlier groups of the Aquiline subfamily; thus supporting that circular arrangement of affinities which prevails throughout all the lesser, as well as the more extensive, divisions of creatures. They are birds of rather a cowardly disposition, and seldom attack prey of great size, confining themselves to the lesser birds, animals, reptiles, fish, &c. They pounce their prey upon the ground.

KITE OR GLEAD.

MILVUS VULGARIS, Flem.

PLATE V.

Milvus vulgaris, Flem. Br. Anim. I. 51. pl. 16.

Falco Milvus, *Linn. Syst. I. p. 126. 12.—Faun. Suec. No. 57.—Gmel. Syst. I. p. 261.—Will. p. 41. t. 6.—Raii Syn. p. 17. A. 6.—Lath. Ind. Ornith. I. p. 20. 37.—Meyer, Tasschenb. Deut. v. I. p. 25.*

Milvus regalis, Briss. I. p. 414. 35. t. 33.—Id. 8vo. p. 118.

Re Milan Royal, *Buff. Ois. v. I. p. 197.—Id. Pl. Enl. 422.—Temm. Man. d'Ornith. v. I. p. 59.*

Rother Milan, *Bechst. Tasschenb. Deut. v. I. p. 13.*

Kite, *Br. Zool. I. No. 53.—Id. fol. t. A. 2.—Arct. Zool. 2. p. 223. H.—Will. (Ang.) p. 74.—Lewin's Br. Birds, I. t. 10.—Lath. Syn. I. p. 61. 43.—Sup. p. 17.—Mont. Ornith. Dict.—Id. Suppl.—Bewick's Br. Birds, I. p. 21.—Haye's Br. Birds. I. t. 5.—Shaw's Zool. 7. p. 103.—Pult. Cat. Dorset, p. 3.—Walc. Syn. I. t. 10.—Don. Br. Birds, 2. t. 47.*

Falco Austriacus, *Gmel. Syst. I. p. 262.—Lath. Ind. Ornith. I. t. 39.*

Austrian Kite, *Lath. Syn. I. p. 62. 45. young bird.*

PROVINCIAL,—Puttock, Fork-tail Glead.

THIS beautiful species, distinguished from the rest of our native Falconidæ by its forked tail, is the only British indigenous member of the fifth subfamily.

Its measurements are considerable, in proportion to the weight of its body, as it frequently exceeds two feet two inches in length, and five feet along the extended wings.

The Kite is variously diffused throughout England, being a common bird in many parts of the country, and rare in others. In all the wooded districts of the eastern and midland counties it is abundant: it is also met with in Westmoreland; but is seldom seen in the northern parts of Yorkshire, in Durham, or Northumberland.

In Scotland, it occurs plentifully in Aberdeenshire, and is found also in the immediate vicinity of Loch Katterine, and of Ben Lomond; also at Loch Awe, and in the adjoining district.

It is proverbial for the ease and gracefulness of its flight, which generally consists of large and sweeping circles, performed with a motionless wing, or at least with a slight and almost imperceptible stroke of its pinions, and at very distant intervals. In this manner, and directing its course by aid of the tail, which acts as a rudder, and whose slightest motion produces effect, it frequently soars to such a height as to become almost invisible to the human eye.

The prey of the kite consists of young game, leverets, rats, mice, lizards, &c. which it takes by pouncing upon the ground. It is a great depredator in farm-yards, after chickens, young ducks, and goslings; and is in consequence bitterly retaliated upon as a common enemy in those districts where it abounds.

It will also, under the pressure of hunger, devour offal and carrion, and has been known to prey upon dead fish.

Some very curious and interesting facts in the history of the Kite are mentioned by MONTAGU *, which shew how completely unguarded or insensible to danger predacious birds are, when intent upon their prey, or urged by the cravings of hunger.

It breeds early in the spring, in extensive woods, generally

* See Supplement to Ornith. Dict. article *Kite*.

Nest, &c. making its nest in the fork of a large tree. The nest is composed of sticks, lined with wool, hair, and other soft material.

The eggs are rather larger than those of a hen, and rarely exceed three in number. They are of a greyish-white, speckled with brownish-orange, principally at the larger end; but sometimes they are found quite plain.

According to TEMMINCK, it is met with in the different departments of France; throughout Italy, Switzerland, and Germany. In Russia it is not common, and is rare in Holland.

Upon the Continent, it generally migrates in autumn; but it remains with us through the whole year.

The figure represented in PLATE 5. is from a female bird, of middle age, and in the proportion of three-fifths of the natural size.

General description.

Bill yellowish-brown at the base, towards the tip blackish-brown. Cere and irides king's-yellow. Head and neck greyish-white, streaked with lines of dusky-black, occupying the centre of the feathers, which are narrow, and sharp-pointed. Upper parts of the body and wing coverts reddish-orange, the middle of the feathers brownish-black, the edges buff-orange. Breast, belly and thighs, reddish-orange, with streaks of brownish-black. Vent and under tail-coverts plain reddish-orange. Tail long, and deeply forked, reddish-orange, with the tips of the feathers reddish-white. Under side of the tail reddish-white, barred with blackish-brown. Primary quills brownish-black; the secondary ones blackish brown, passing into blackish-grey. Thighs adorned with long plumes. The tarsi short and scaled, of a Dutch-orange colour. Claws bluish-black, and not much hooked.

GENUS ELANUS, SAVIGNY. ELANUS.

GENERIC CHARACTERS.

Bill weak, of mean length, compressed, nearly straight at the base, the tip hooked. Wings long, with the second feathers generally the longest. The first and second having their inner web strongly notched. Tail long, more or less forked. Legs with the tarsi short, feathered for half their length; the naked part of the tarsus being reticulated. Claws strong, and incurved; the under surface, in some species, partly rounded.

The birds of this genus, like the Kites, are remarkable for their graceful circling flight. In them the bill is of weak conformation, and with a very slight indication of a festoon upon the upper mandible. The tarsi are short, and feathered half way along the front. The toes are *separate*, and, in some species, the side and hind claws are rounded beneath, as in the genus *Pandion*. Their food consists of reptiles, &c., but more particularly of the larger insects, which they capture with their feet, and then devour *in the air*. They seem to represent the *fissirostral* tribe of the Insessores among the Falconidæ.

SWALLOW-TAILED ELANUS.

ELANUS FURCATUS, Savigny.

Elanus furcatus, Shaw's Zool. 13. 49. sp. 2.

Nauclerus furcatus, Vig. in *Zool. Journ.* No. 7. 387.—*Lesson's Num. d'Ornith.* 1. 101.

Falco furcatus, Linn. Syst. 1. 129. 25.—*Gmel. Syst.* 1. 262.—*Lath. Ind. Orn.* 1. 22. sp. 41.—*Linn. Trans.* 14. 583.

Milvus Carolinensis, Briss. 1. 418. 36.

Milan de la Caroline, Buff. Ois. 1. 221.—*Cuv. Reg. Anim.* 1. 322.

Swallow-tailed Falcon, Penn. Arct. Zool. 2. No. 108. t. 10.—*Lath. Syn.* 1. 60. 42.

Swallow-tailed Hawk, Wils. Amer. Orn. 6. 67. pl. 51. f. 3—*Id. Ed. Sir Wm. Jardine,* 2. 275. p. 51. fig. 3.—*Audubon's Pl.* 72.—*Id. Orn. Biog.* 1. 361.

Occasional visitant. I INSERT this elegant species in the list of our fauna as an occasional visitant, upon the authority of two specimens; one of which was killed at Ballachoalish, in Argyleshire, in 1772, and recorded by the late Dr WALKER in his *Adversaria* for 1772 and 1774; the other was taken alive in Shaw-Gill near Hawes, in Wensley-dale, Yorkshire, in September 1805, and mentioned in the 14th Vol. of the Linnean Transactions, p. 183. In the Southern States of North America, in Peru and other parts of South America, it is an abundant species; but, according to AUDUBON, has never been seen to the north or eastward of Pennsylvania. From the description given of it by that practical ornithologist, and from that of the not less gifted WILSON, (to both of which I must, on account of their length, refer my readers,) the habits of this, and, I believe, of the other species of Elanus, differ in many essential particulars from those of the more typical Falconidæ. The prey of this bird, whether consisting of reptiles or of insects, taken upon wing, either in their flight, from the surface of the ground, or from the branches and trunks of trees, is invariably devoured *in the air*. It is remarkable for the gracefulness of its motion on wing, and the extraordinary evolutions it performs when in pursuit of its insect prey. Contrary to the habits of the other Falcons, it is gregarious, being frequently seen in great numbers together, and so unwilling is the flock to desert a companion in distress, that when one is shot or wounded, instead of flying from the danger, they all assemble over the dead or dying bird, and continue to hover over it, even after being repeatedly fired at, and having their numbers diminished by each successive discharge *. It breeds, according to AUDUBON, in the tops of the highest oak and pine trees near the margin of ponds and streams, making a nest similar in external appearance to that of the crow; formed outwardly of dry sticks intermixed with Spanish moss, and lined with coarse grass and a few feathers.

* See AUDUBON'S Ornith. Biograph. vol. 1. p. 368. article *Swallow-tailed Hawk*.

The eggs, from four to six in number, are of a greenish-white, with a few irregular blotches of dark brown at the larger end. The young, when excluded, are covered with a buff-coloured down, above which succeeds plumage very similar to that of the adult, but destitute of its lustre and purple reflections. This they retain till spring, when it becomes matured.

The average size of this species appears to be about twenty-five inches in length, by four feet two or three inches in extent of wings. The bill is black, of mean strength ; the cutting margins without a sinuation. The cere yellow, or, according to AUDUBON, pale blue; its base covered with bristles. The head, neck, and under plumage, white, with a slight tinge of grey ; the shafts of the feathers indicating a dark line upon the head, neck, and breast. Mantle, wing-coverts, and scapulars, black, with blue and purple reflections. Quills black ; the third the longest in the wing ; the first being equal to the fifth. Tail of twelve feathers ; and very deeply forked ; the lateral ones much elongated, black, with green and purple reflections. Legs greenish-blue ; the tarsi very short, feathered half way down the front ; the naked part covered with reticulated scales. Toes short and divided ; the anterior joints scutellated. Claws much incurved, acute ; their colour flesh-red.

FAMILY IV.—STRIGIDÆ.

The Owls or nocturnal birds of prey, which form the fourth natural family of the order *Raptores*, are distinguished by a peculiarity of physiognomy, that at once separates them from all the others, and cannot fail to make them at once cognizable by the most cursory observer. For, though nearly related as they undoubtedly are in direct affinity with the Falconidæ, it cannot but be allowed, that a certain gradation of form is wanting (either as yet undiscovered, or no

longer existing) to fill up the chasm which at present separates the nearest resembling members of the two families, and which appear to be some species of the genus *Circus* among the Falconidæ, and the Accipitrinæ or *Hawk Owls* among the Strigidæ. By their near affinity also to the *Caprimulgidæ* (Goatsuckers), particularly seen in the genus *Podargus*, the connection between the Insessorial and Rapacious birds is beautifully sustained, though a similar deficiency of intermediate forms is even in this case observable. By far the greatest proportion of the *Strigidae* are nocturnal or crepuscular feeders, sallying forth from their concealed retreats towards the close of day, when other birds are retiring to roost, but when the other animals which form their principal support are quitting their holes to feed, in expected security, during the silence and darkness of the approaching night. Some of the species, however, are capable of bearing the light of day; and these pursue their prey in the same manner as the *Falconidae*. A nearer approach to that family is also here observable, in the smaller size of the facial disk, the dimensions of the eye, and the comparative length, as well as stronger structure, of the wings and tail. In the nocturnal species, which steal upon their prey by the noiselessness of their flight, the plumage is remarkably soft and downy; the margins of the wing-feathers (the great organs of motion) being loose, and divided into fine filaments, thus offering the least possible opposition in passing through the air, and their progress is by a slow and gentle motion of the pinions. The ear also is of a singular construction, and developed to an extent seen in no other birds, giving them an acuteness and delicacy of hearing, that can detect even the slightest rustling of their prey. Their eyes also, in the greater part directed *forwards*, are, from their size, position, and construction, beautifully calculated for collecting and concentrating the horizontal and dim rays of twilight. The small degree of attention that has hitherto been given to the peculiar features that distinguish the *Owls*, especially to the

organ of hearing (and upon a strict analysis and comparison of which only a circular arrangement of the subdivisions can be formed agreeable to nature), compels me to adhere at present to an arrangement of the British species under the generic heads admitted by most of the eminent modern ornithologists.

The general characters of the family may be stated as follows. Bill hooked, compressed ; the base covered with a cere. Nostrils, oval or rounded ; placed in the anterior part of the cere, and covered, as well as the greater part of the bill, with reflected bristly feathers. Head large ; face more or less flat, surrounded by a ruff or border of small close-set feathers. Eyes large, encompassed by a radiated circle of slender hairy feathers. Toes three before and one behind, the outer one reversible. Claws moderately incurved ; long, and very sharp. Plumage soft and downy.

GENUS BUBO, CUV. EAGLE OWL.

GENERIC CHARACTERS.

Bill, short, strong, bending from the base, compressed towards the tip. The cutting margin of the upper mandible slightly sinuated. Nostrils, large, oval or rounded, placed in the anterior part of the cere. Facial disk small and incomplete above the eyes ; head furnished with *egrets* or tufts. Auditory opening, small, oval, without an *operculum*. Wings rather short, concave ; the third and fourth quill-feathers generally the largest. Legs and toes clothed with feathers. Outer toe reversible ; claws long, moderately curved, and very sharp.

This genus was established by CUVIER, and contains, besides the *Great-horned* or *Eagle Owl* of Europe, several other species, amongst which may be mentioned the Virginian Horned Owl (*Bubo Virginiana*) and the Arctic Horned Owl (*Bubo Arctica*) of Dr RICHARDSON and SWAINSON,

both natives of North America. They differ from the other *Eared Owls* in having the facial disk less distinctly marked, and incomplete above the orbits of the eyes, and in the comparative smallness of the external auditory conch, which is farther destitute of an *operculum* or flap. Their habits may be stated as nocturnal, though not so strictly so as some of the other genera, as they are not unfrequently seen abroad, and in activity, before the sun sinks below the horizon; and most in the Arctic Regions (which some species constantly inhabit), regularly fly in day-light during the summer months. They are also observed to be less annoyed, and to appear less stupefied, when disturbed during the day, than the true nocturnal feeders; and to be so much upon the alert, as seldom to admit of a close approach. They are birds of great strength and activity, and prey upon mammalia, birds, and sometimes fish, which they strike with their talons.

GREAT-HORNED OR EAGLE OWL.

Bubo maximus, Sibbald.

PLATE XIX.

- Bubo maximus, Sibb. Scot.* 15.—*Flem. Br. Anim.* 1. 57. No. 30.
Strix Bubo, Linn. 1. p. 131.—*Gmel. Syst.* p. 286. sp. 1.—*Lath. Ind. Ornith.* v. 1. p. 51.—*Raii Syn.* p. 24. 1.—*Will.* p. 63. t. 12.—*Briss.* 1. p. 477.
Le Grand Duc, Buff. Ois. v. 1. p. 322.—*Id. Pl. Enl.* 435.—*Veil. Ois. d'Afriq.* v. 1. p 106. pl. 40.
Hibou Grand Duc, Temm. Man. d'Ornith. v. 1. p. 100.
Grosse Ohreule huhu, Bechst. Naturg. Deut. v. 2. p. 382.—*Meyer, Tassch.* Deut. v. p. 70.—*Id. Vog. Liv. und Esth.* p. 33. sp. 4.
Strix Bubo Atheniensis, Gmel. Syst. 1. p. 286. var. B.
Black Wing Horn-Owl, Abb. 3. t. 6.
Athenian Horn-Owl, Edw. t 64.—*Lath.* 1. p. 118.
Great-eared Owl, Br. Zool. 1. No. 64. t. 29.—*Arct. Zool.* 2. No. 114.—*Albin,* 3. t. 6.—*Will. (Ang.)* p. 99. t. 12.—*Lath. Syn* 1. p. 116. 1.—*Id. Supp.* p. 40.—*Lewin's Br. Birds,* 1. t. 23.—*Mont. Ornith. Dict.*—*Id. Supp.*—*Bewick's Br. Birds, Supp.*—*Walc. Syn.*—*Shaw's Zool.* v. 7. p. 211.
Eagle Owl, Flem. Br. Anim. 1. 57. 30.—*Rennie's Orn. Dict.* 159.

THIS species, which is equal in size to some of the largest Eagles, is of very rare occurrence in Great Britain; and, in

the few instances on record, the birds can only be regarded as wanderers, or compelled by tempest to cross the Northern Ocean *. Occasional visitant.

It preys upon fauns, rabbits, the different species of grouse, Food. rats, &c.—It builds amid rocks, or on lofty trees, and lays Nest, &c. two or three eggs, larger than those of a hen, round at each end, and of a bluish-white colour.

According to TEMMINCK, it is common in Russia, Hungary, Germany, and Switzerland. It is also stated to be a native of Africa; but has not been met with in the New World. Its place is there supplied by the Virginian and Arctic Horned Owls.

The Athenian Horned Owl of EDWARDS appears to be a small variety of this species; and DR LATHAM enumerates amongst its varieties, the Smooth-legged, and Magellanic Eared Owl or Jurucatu. This latter, indeed, is now with greater probability supposed to have been a bird of the present species, denuded of feathers upon the tarsi by moult, or some accidental cause. As the rarity of the bird in this country permits so few opportunities of learning any particulars of its habits, I avail myself of Sir WM. JARDINE's interesting observations upon an individual that he kept for several years, and which by his kindness has now come into my possession. See Note on the *Great-horned Owl* in Sir WM. JARDINE's edition of WILSON's American Ornithology, 2. 257.

PLATE 19. The figure on this Plate represents a male bird of this species, in the proportion of about three-fifth parts of the natural size.

Base of the bill pale yellowish-brown, the tip darker. General Irides bright orpiment-orange. Upper parts of the body varied and spotted with black, ochre-yellow, and

* I have been lately informed, from very good authority, that one of the above species was killed on the upland moors in the county of Durham some years ago. This specimen was afterwards in Mr BULLOCK's museum.

yellowish-grey. Under parts ochre-yellow, with oblong black spots and streaks. Chin white. Thighs deep ochre-yellow, with a few transverse blackish-brown lines and bars. Legs and toes thickly clothed with downy feathers of the same colour as the thighs. Claws very long and sharp, colour pale yellowish grey. Horns composed of six or eight elongated feathers, varied, and coloured like the rest of the plumage.

The female is similar to the male bird, except in wanting the white upon the chin or throat, and is superior in size.

GENUS OTUS, *Cuv.* EARED OWL.

GENERIC CHARACTERS.

Bill bending from the base, and forming an elliptic curve; the cere covering the basal ridge for nearly half the length of the bill. Cutting margin of the upper mandible straight, the under one having the tip obliquely truncated and notched. Nostrils, oval, obliquely placed. Facial disk of moderate size, and complete. Conch of the ear extending from the outer angle of the eye to behind the limb of the lower jaw, the opening defended by a flap or *operculum*. Head furnished with egrets. Wings long; the second quill-feather the longest. Tail even, and scarcely shewing any concavity beneath. Legs and toes feathered to the insertion of the claws. Toes rather short; the outer one reversible. Claws moderately curved, long, and very sharp; rounded beneath, except the middle one, which is grooved, and with a sharp inner edge.

This natural group (of which *Otus vulgaris* may be considered the type) has also been separated from the other Strigidae by the great French naturalist, whose recent death the scientific world has such reason to deplore. The members of this genus are distinguished by the completeness of

their facial disk, by the great size of the external auditory opening defended by an operculum, and by egrets more or less distinct upon the forehead ; their wings also are long and ample, and the second quill-feather exceeds all the rest in length. Their habits are more nocturnal than those of the preceding genus, although one species, *Otus Brachyotos*, which appears to tend to the Hawk Owls, is sometimes seen flying by day, in lowering and gloomy weather. They prey upon the smaller mammalia (particularly those of the order *Glires*, FLEM.), and also upon birds, which they capture at roost. Their flight is light and buoyant, and sometimes tolerably rapid. Some of the species inhabit woods and forests, others (in which a slight departure from the type is observable) affect more open districts and extensive heaths.

LONG-EARED OWL.

OTUS VULGARIS, Flem.

PLATE XX.

Otus vulgaris, Flem. Br. Anim. I. 56. No. 27.

Otus Europeus, Shaw's Zool. 13. 56.

Strix Otus, Linn. Syst. I. p. 132. 4.—*Gmel.* Syst. I. p. 288. sp. 4.—*Lath.* Ind. Ornith. v. I. p. 53. 7.—*Raii.* Syn. p. 35. a. 2.—*Will.* p. 64. t. 12.—*Le Moyen Duc, ou Hibou*, Buff. Ois. v. I. p. 342.—*Id.* Pl. Enl. 29.

Hibou Moyen Duc, Temm. Man. d'Ornith. v. I. p. 102.

Mittler Ohreule, Bechst. Naturg. Deut. v. 2. p. 896.—*Meyer*, Tasschenb. Deut. v. I. p. 93.—*Frisch.* Vög. 29.

Hoorn Uil, Sepp. Nederl. Vög. p. 303.

Long-eared Owl, Penn. Br. Zool. I. No. 65. t. 30.—*Arct. Zool.* 2. No. 115.—*Lath.* Syn. v. I. p. 121.—*Id.* Supp. p. 42.—*Lewin's Br. Birds*, I. t. 24.

—*Mont. Ornith. Dict.*—*Id.* Supp.—*Walc.* Syn. t. 23.—*Will.* (Ang.) p. 99. t. 12.—*Bewick's Br. Birds*, v. I. P. I. 46.

Italian-eared Owl, Lath. Syn. I. p. 122.

THE excellent mixture of colours in this bird, and the imposing appearance of its long tufts or ears, render it one of the most interesting of its genus. Though not so numerous as the Barn (*Strix flammea*), or the Tawny Owl (*Ulula stri-dula*), it is found in most of the wooded districts of England and Scotland. Plantations of fir, particularly of the *spruce*

kind, are its favourite haunts, as in these it finds a secure and sheltered retreat during the day. It also frequently inhabits thick holly or ivy bushes, whose evergreen foliage ensures a similar retirement. It is an indigenous species, and breeds early in spring ; not making any nest of its own, but Nest, &c. taking possession of that of a Magpie or Crow.—The eggs are generally four or five in number, white, and rather larger and rounder than those of the Ring-Dove. When first excluded, the young birds are covered with a fine and closely set white down ; they remain in the nest for more than a month before they are able to fly. If disturbed and handled, they hiss violently, strike with their talons, and, at the same time, make a snapping noise with their bills. When they quit the nest, they take up their abode in some adjoining tree, and, for many subsequent days, indeed for weeks, may be heard after sunset uttering a plaintive but loud call for food ; during which time the parent birds are seen diligently employed in hawking for prey.

Food.

Mice and moles form the principal part of their proven-
der ; though MONTAGU * says, that they seldom take small
birds on the roost.

In the stomach of one individual, I found five skulls of mice, which were, without doubt, the relics from its repast of the previous night. This bird is of a resolute character, and, when wounded, or taken by surprize, throws itself upon its back, and makes a vigorous defence with its claws, hissing with violence, and snapping with its bill. In this situation, the ears are fully elevated, and projected forwards.

It is pretty generally diffused throughout Europe ; and in North America is found to inhabit the woods at a distance from the sea. It has been observed as far northward as latitude 60° ; and, as Dr RICHARDSON observes, “ probably exists as high as the forests extend.”

* MONT. Ornith. Dict. vol. ii.

PLATE 20. A male bird, and nearly of the natural size.

Bill blackish-grey ; bending from the base, and forming General
an elliptic arch ; with the culmen rather broad and descrip-
round. Irides Dutch orange, inclining to orpiment-
orange. The bristly feathers covering the nostrils and
base of the bill are white, with black shafts. Above
the eye, and at the inner angle, black. Cheeks tawny.
The circle of small feathers surrounding the face mot-
tled with white, black, and orange-brown. Above each
eye is a tuft of six or eight elongated feathers, of a liver
brown, margined with yellowish-brown and white, which
the bird can erect or depress at pleasure. Upper parts
of the body pale orange-brown, streaked with blackish-
brown, and beautifully powdered with black, white and
grey specks. Quills barred with brownish-black, the
bases of the primary ones orange-brown. Exterior web
of the outer quill serrated, and the points of the barbs
reverted. Second quill-feather the longest ; the first be-
ing equal to the fourth, which is about half an inch
shorter than the third. First quill having its inner web
notched at about an inch from the tip. Tail pale
orange, with a greyish tinge, barred and spotted with
black ; square and straight. Under parts ochreous-yel-
low, passing into white, with oblong and arrow-shaped
streaks and spots. Legs and toes clothed with pale
buff-coloured feathers as far as the two last scales upon
the toes. Claws long, very sharp, and moderately cur-
ved ; the middle one grooved beneath, and having a
sharp edge ; the inner one imperfectly grooved ; the
outer and hind claw rounded.

SHORT-EARED OWL.

OTUS BRACHYOTOS, Cuv.

PLATE XXI.

- Otus Brachyotos, *Flem. Br. Anim.* 1. 56. No. 28.—*Shaw's Zool.* 13. 57.
Strix Brachyotos, Lath. Ind. Ornith. 1. p. 55. 11.—*Gmel. Syst.* 1. p. 289.
 sp. 17.—*Meyer, Tasschenb. Deut.* 1. p. 73.
Strix Ulula, Lath. Ind. Ornith. 1. p. 60. sp. 27. var. B.—*Gmel. Syst.* 1.
 p. 294.
Strix Brachyura, Nils. Faun. Suec. v. 1. p. 62. sp. 27.
Hibou Brachyote, Temm. Man. d'Ornith. v. 1. p. 99.
Chouette ou Grand Chevêche, Buff. Ois. v. 1. p. 372. t. 27.—*Id. Pl. Enl.* 438.
Chouette Caspienne, Sonn. Nouv. ed. Buff. Ois. v. 4. p. 169.
Kurzörige Ohreule, Bechst. Naturg. Deut. v. 2. p. 909.—*Frisch. Nög.* t. 98.
Caspian Owl, Lath. Syn. v. 1. p. 140. and 147.
 Short-eared Owl, *Penn. Zool.* v. 1. p. 204. and 206.—*Arct. Zool.* 2. No. 116.
 —*Lewin's Br. Birds,* 1. t. 25.—*Lath. Syn.* 1. p. 124. 9.—*Id. Supp.* p. 43.
 —*Mont. Ornith. Dict.* v. 2.—*Walc. Syn.* 1. t. 25.—*Pult. Cat. Dorset.* p. 4.
 —*Bewick's Br. Birds,* 1. p. 48. and 50.—*Low's Faun. Orcad.* p. 42.—*Wils. Amer. Orn. ed. Sir Wm. Jardine,* 2. pl. 33. f. 3.—*Northern Zool.*
 2. 75. No. 19.

PROVINCIAL.—Hawk Owl, Woodcock Owl.*

Winter
resident in
England.

The birds of this species are only to be met with in the southern parts of England, between the months of October and April, as they migrate on the approach of spring to Scotland and its islands, where they breed. Mr Low, in his *Fauna Orcadensis*, mentions this Owl as being very frequent in the hills of Hoy, where it builds its nest amongst the heath. It is there of great boldness, and has been seen to chace pigeons in the open day †. In a nest, which contained two full-fledged young ones, he found the remains of a moorfowl, and two plovers, besides the feet of several others.

In this country they generally remain concealed in long grass, or in rushy places, upon waste grounds or moors. In

* The name of *Woodcock Owl* has been given to this species in England, from its appearance and departure coinciding with those of the bird from which the title is derived.

† I have seen it hawking by day, in gloomy weather, upon the Northumbrian moors.

autumn, I have often met with them in turnip fields, but have never seen them in plantations; nor do they ever attempt to perch upon a tree. Five or six of these birds are frequently found roosting together; from which circumstance it is probable that they migrate in families. MONTAGU thinks that this may arise from the abundance of food they meet with in the places where they are thus collected, but the truth of this supposition I am inclined to doubt, from the fact of their being seldom met with during two days together in the same place.

They rarely appear in England previous to the beginning of October, though I have killed two or three individuals when grouse-shooting on the upland moors in August, at which season they were in the moult*.

* Sir WILLIAM JARDINE (in a note on this species in his edition of WILSON's American Ornithology) thinks that it may rank as a *summer visitant* in the *north* of England and Scotland; and would even extend the southern limit of its incubation to the extensive moorland ranges of Cumberland, Westmoreland, and Northumberland. He appears to entertain no doubt but that the birds killed in such situations, during the grouse seasons, bred there; and goes on to state what (from its interesting nature) I make no apology for transcribing. "On the extensive moors at the head of Dryfe (a small rivulet in Dumfriesshire), I have, for many years past, met with one or two pairs of these birds, and the accidental discovery of their young first turned my attention to the range of their breeding; for, previous to this, I also held the opinion that they had commenced their migration southward. The young was discovered by one of my dogs pointing it; and on the following year, by searching at the proper season, two nests were found with five eggs. They were formed upon the ground among the heath, the bottom of the nest scraped until the fresh earth appeared, on which the eggs were placed, without any lining or other accessory covering. When approaching the nest or young, the old birds fly and hover round, uttering a shrill cry, and snapping with their bills. They will then alight at a short distance, survey the aggressor, and again resume their flight and cries. The young are barely able to fly by the 12th of August, and appear to leave the nest some time before they are able to rise from the ground. I have taken them, on that great day to sportsmen, squatted on the heath like young black game, at no great distance from each other, and always attended by the parent birds. Last year (1831) I found them

The head of this Owl being smaller than the generality of its fellow species, has procured it, in some parts, the name of *Hawk Owl*, or *Mouse Hawk*. Many ornithologists have been in doubt respecting it, and the synonyms are consequently in some confusion and obscurity. They appear to have been deceived by the dissimilar aspect of the head between the living and dead bird, as it is only in the first state that the horns or ears are visible.

Food.

Their principal food with us consists of field-mice; but from Mr Low's account (as before quoted), it should seem that they do not always confine themselves to such diet. MONTAGU also mentions one, in whose craw he found part of a lark, and a yellow hammer *. When first disturbed, they fly to a short distance, look intently at the object of their alarm, at the same time visibly erecting their horns. If a dog be in company, they hover above it, uttering at the same time a querulous and impatient cry. When wounded, they defend themselves with the same resolution, and in the same manner as the preceding species.

This Owl is of wide locality, being met with in Siberia, and in many parts of North America; and specimens are also mentioned as having been brought from the Sandwich Islands.

PLATE 21. The bird here represented measured fifteen inches in length, and three feet across the extended wings.

General description.

Bill bluish black; elliptically curved; and with a broad rounded culmen. Irides bright gamboge-yellow. Feathers covering the nostrils, white, with black shafts. Circle immediately above the eyes brownish-black. Cheeks yellowish-brown, the shafts and ends of the

in their old haunts, to which they appear to return very regularly; and the female, with a young bird, was procured; the young could only fly for sixty or seventy yards."

* MONT. Ornith. Dict. Supplement, article *Short-eared Owl*.

feathers black. Circle of small feathers behind the auditory conch, mottled with yellowish-orange, black, and white, except opposite to the orifice of the ear, where it is wholly black. Forehead furnished on each side with four or five feathers a little longer than the rest, which it can erect or depress at pleasure. Head, back, and wing-coverts liver-brown, deeply edged with pale buff-orange. Greater quills bright ochreous yellow, the two first with *two* dusky bars on the outer web, the next two with *three*, and the rest with *four*; all of them having one irregular bar on the inner web; and the tips fading into ash-grey. Second quill-feather the longest; the first shorter than the third. First quill notched, near the tip, on the inner-web; with the outer web serrated, and the barbs recurved. Wings, when closed, reaching about an inch beyond the tail. Breast and fore part of the neck buff-orange, streaked with brownish-black or liver-brown down the centres of the feathers, with the edges ochreous-yellow. Belly and abdomen yellowish-white (in some pale yellowish-brown), with dark brown shafts to the feathers. Tarsi and toes pale ochreous-yellow, without spots or streaks; the feathers on the toes assuming a hairy appearance. Claws blackish-grey, long, moderately incurved, and very sharp. The middle claw grooved beneath, with a sharp inner edge; the rest having the under surface rounded.

This description varies but little from that of PENNANT, who first gave an accurate description of this bird, and added it to the British Fauna. My measurement is, however, greater than that which he assigns to it; but it proved to be the general standard of a great many specimens that came under my hand.

GENUS SCOPS, SAVIGNY. SCOPS OWL.

GENERIC CHARACTERS.

Bill curved from the base ; the upper ridge of the culmen flattened ; the cere short ; nostrils placed in front of the cere, round. Facial disk small, and incomplete above the eye orbit. Auditory conch small, and without an operculum. Forehead with egrets or tufts. Wings long ; the third feather the longest in the wing. Tail even, or slightly rounded, concave beneath. Legs rather long ; the tarsi feathered to the toes, which have their upper joints reticulated, and the anterior ones scutellated. Claws sharp, moderately curved, and partially grooved beneath. General plumage soft and downy.

This genus, instituted by SAVIGNY, appears to bear the same analogy to the large Eared-Owls, that the small Night-Owls (genus *Noctua*) do to the larger smooth-headed groups. Their habits, from the accounts of SPALLANZANI and others, are nocturnal, and they seldom issue from their day-retreats before the sun has fairly set below the horizon. Their prey consists of insects, mice, and other small animals of that kind.

SCOPS-EARED OWL.

Scops ALDROVANDI, Will. and Ray.

PLATE XXII.

- Scops Aldrov. *Will. Orn.* 65.—*Flem. Br. Anim.* 1. 57. No. 31.
 Strix Scops, *Linn. Syst.* 1. p. 129. 5.—*Gmel. Syst.* 1. p. 290. sp. 5.—*Lath. Ind. Ornith.* v. 1. 56. 18.—*Raii Syn.* p. 25. 3.—*Briss. 1. p. 495.*—*Will. (Ang.) p. 65. t. 12.*
Strix Zorca et Giu, Lath. Ind. Ornith. v. 1. p. 56. 15. et 16.
Le Petit Duc. Buff. Ois. v. 1. p. 353. t. 24.—Id. Pl. Enl. 436.
Hibou Scops, Temm. Man. d'Ornith. v. 1. p. 107.
Kleine Ohreule, Bechst. Naturg. Deut. v. 2. p. 912.—Meyer, Tasschenb. Deut. v. 1. p. 74.
Scops-eared Owl, Lath. Syn. 1. p. 129. t. 15.—Id. Supp. p. 43.—Mont. Supp. to Ornith. Dict.—Bewick's Supp. to Br. Birds.

IN consequence of a few well authenticated instances of this handsome little Owl having been lately taken in England, I have ventured to insert it as an occasional visitant, ^{Occasional} and to give a representation of one obtained, as I am assured, in the neighbourhood of London*.—It is very common in the warmer parts of Europe during the summer months, but regularly leaves them on the approach of autumn, for regions nearer to the equator. In France, it arrives, and departs with the swallow. Its favourite residence in Italy, according to SPALLANZANI, is in the lower wooded regions,—Field and shrew mice, insects, and earth-worms, are its food, in quest of which it sallies forth at night-fall, uttering at the same time its cry, which resembles the word *chivi*, and whence, in some districts, it has acquired the name of Chivini. It constructs no nest, but deposits five or six eggs in the hollow of a tree.

Food.

An interesting account of the habits and manners of this bird is given by the above-mentioned author, who reared and domesticated several nestlings. From the few species of Strigidae to be met with in our collections rendering fruitless any attempt at analysis, and the very slight attention that has hitherto been paid to the *peculiar characters* and economy of these interesting birds, I am prevented in the wish to trace the direct affinities of this species, or the relation that the group it belongs to is likely to bear to others, in the circular arrangement of the family. It is to be hoped that the labours of some of the ornithologists of the present day will speedily be directed to this point.

PLATE 22. Figure of the natural size.

Bill black. Irides king's-yellow. Head, face, and neck, smoke-grey, beautifully speckled with black and brown. Breast and belly ash-grey, barred and speckled with

General description

* I have seen a specimen which was killed near York, and is now in the possession of that ingenious artist MR BEWICK. The *Foljambe Collection* also possesses English specimens of this species.

black and reddish-brown. Back chesnut, sometimes yellowish-brown, with a greyish cast, crossed by fine black zigzag lines. Quills having the outer webs alternately barred with white and mottled brown. The second and third quill-feathers the longest; the inner web of the first and second notched near the tip; the outer webs of the same slightly sinuated, and that of the first having the points of the barbs *serrated*, but not reversed. Tail barred and spotted with black, brown, and white. Tarsi feathered, of an ash-grey colour, speckled with brown; with the under part of the joint, and a small space below, naked. Toes naked, bluish-grey, with the first joints reticulated, and the anterior ones scutellated. The outer toe capable of being turned backwards. Claws pale yellowish-brown. The feathers which compose the horns amount to six or eight on each side; and do not consist of a single feather, as LINNÆUS and the early writers have asserted.

GENUS SURNIA, DUMERIL. HAWK-OWL.

GENERIC CHARACTERS.

BILL short, bending from the base, the cutting margin slightly sinuated. Cere short. Nostrils large, oval, obliquely placed at the anterior margin of the cere. Facial disk very incomplete and small, eyebrows projecting. Ears small, oval. Wings of mean length; not reaching, when closed, to the end of the tail. The third quill-feather the longest. Tail elongated, rounded, or wedge-shaped. Legs and toes thickly feathered. Claws long, very sharp, and much incurved. Inner and middle claws grooved beneath, the latter having a sharp inner edge; those of the outer and hind toes rounded. General plumage firmer in texture than the more nocturnal group.

The genus *Surina*, established by DUMERIL to embrace those species of the Strigidæ which shew a considerable approximation to the *Falconidæ* (not only in the habit of hawking by day, but also in form, having smaller heads, less complete facial disks, and longer tails, than the other Owls), appears properly to include the *Snowy Owl* of authors, as that bird possesses all the essential characters of the other *Hawk Owls*, and its habits (from the statement of those who have studied and observed them) are declared to be those of a day-flying, rather than a nocturnal bird of prey. The members of this genus are natives of high northern latitudes, and are widely distributed. They feed upon birds, animals, and fish. Their plumage, although soft, has not the *downy* texture or appearance so distinctive of the more typical or night-flying kinds.

SNOWY OWL.

SURNIA NYCTEA, Dumeril.

PLATE XXIII.

Surnia Nyctea, Dumeril.—*Sir Wm. Jardine's ed. of Wils. Amer. Orn.* 2. 46.
Strix Nyctea, Gmel. Syst. 1. p. 201.—*Lath. Ind. Ornith.* 1. 57. sp. 20.—
Meyer, Tasschenb. Deut. v. 1. p. 75.—*Wils. Amer. Ornith.* v. 4. p. 53.
pl. 32. f. 1.

Nyctea cinerea, Shaw's Zool. 13. 68.

Strix alba Freti-Hudsonis, Briss. 1. 522.

La Chouette Harfang, Buff. Ois. v. 1. p. 387.—*Id. Pl. Enl.* 458.—*Temm. Man. d'Ornith.* v. 1. p. 82.—*Veil. Ois. d'Amer. Sept.* v. 1. pl. 18.

Chouette blanche, Vaill. Ois. d'Afr. v. 1. pl. 45. old bird.

Schnee-Kauz, Bechst. Naturg. Deut. v. 2. p. 925.

Schnewuil, Meyer Vög. Liv. und Esthl. p. p. 29.

Snowy Owl, Arct. Zool. 2. No. 121.—*Lath. Syn.* 1. p. 132. 17.—*Id. Supp.* p. 45.—*Mont. Supp. to Ornith. Dict.*—*Bewick's Supp. Br. Birds.*—*Wer-nerian Trans.* v. 4.

IT is only within these few years past that this noble and beautiful Owl has been established as indigenous in Great Britain. In a tour made to the Orkney and Shetland Isles, in the year 1812, Mr BULLOCK, the late proprietor of the London Museum, met with it in both groups of islands; and

it is now ascertained that the species is resident, and breeds there. I have seen specimens that were killed in Shetland, since the above-mentioned period, and some of which are now in the magnificent Collection at the Edinburgh Museum. From the observations that have been made on its habits, it appears to be by no means confined to twilight for its supplies of food, rather perhaps the reverse, as it has been seen pursuing its prey in the day-time.

Food. Alpine hares, rabbits, rats, and the different species of grouse, fall under that description *. It rests exposed upon the ground, where it can look around it, and descry the approach of an enemy.

Those seen by Mr BULLOCK were upon the open sand-banks, on the sea-shore, which, from abounding with rabbits, were doubtless their favourite haunts.

Nest, &c. They breed on the ledges of precipitous rocks, the eggs, being two in number, of a pure white, according to most authors; but by VEILLOT, they are said to be spotted with black †.

It is common in the regions of the arctic circle, even inhabiting during summer the frozen coast of Greenland. Is very numerous on the shores of Hudson's Bay, and the most remote arctic islands that have been visited, belonging to the American Continent; also in Norway, Sweden, and Lapland; but is of very rare occurrence in the temperate parts of Europe and America.

* WILSON informs us that it is a dexterous fisher; pouncing its finny prey by an instantaneous stroke of the foot, either in skimming near the surface, or from its position on a stone in shallow-water. DR RICHARDSON has seen it pursue the American hare on the wing, and make repeated strokes with its foot at the animal.—See “Northern Zoology,” vol. ii. p. 89.

† DR RICHARDSON says, that this bird “makes its nest on the ground, and lays three or four white eggs, of which usually only two are hatched. In winter, when fat, it is esteemed delicate eating by the Indians. Its flesh is *very white*.”

+ *This specimen was killed at Weston-super-Mare
Norfolk 1850.*

The figure on PLATE 23. is nearly in the proportion of three-fourths of the natural size, taken from a specimen killed in the Shetland Islands, and which, from its numerous brown bars and spots, appears to have been either a young bird, or of middle age, as the old of this species exhibit a pure white plumage.

Bill black, nearly hidden by the projecting bristly feathers at its base. The head, compared with other Owls, is small, in proportion to the size of the body. Irides gamboge-yellow. Spots and bars on the plumage brownish-black. Legs and toes very rough, and clothed with long hairy feathers, that almost conceal the claws, which are long, black, and very sharp. The outward orifice of the ear much smaller, and rounder in shape than is found in the other species.

Since writing the above description, two very fine specimens (a male and female) of this rare British bird were killed near Rothbury, in Northumberland, in the latter part of January 1823, during the severe snow-storm that was so generally felt throughout the north of England and Scotland. They are the only individuals of this species hitherto taken, or, I believe, seen in England, and are now in my collection.

From the number of bars and black spots upon the head, back, scapulars, wings, and belly of the female, it appears to be a young bird. Its dimensions, when recently killed, were as follows. Length from the tip of the bill to the end of the tail two feet one inch. Breadth with extended wings five feet. The male is of inferior size, and is much whiter than the female. Bill black; nearly hidden by the bristly recurved feathers at the base. Facial disk small, only occupying the base of the bill and part of the lower eye-orbit. Eye-brows projecting. Wings, when closed, shorter than the tail by nearly two inches. The third quill-feather the longest. Legs and toes very thickly clothed with hairy fea-

thers. Claws black, very long, and much incurved; the middle one with a sharp inner edge, and grooved; the inner claw also grooved; and the outer and hind ones cylindrical.

Both these birds were killed upon the open moor, in a wild and rocky part of the county, and, according to description, were generally seen, during the few days that intervened between their first appearance and death, perched upon the snow, or on some large stone projecting from it.

The female, which was sent to me immediately after being shot, was dissected and preserved at home. She was in excellent condition, and was covered entirely under the skin with a layer of fat, nearly a quarter of an inch in thickness.

Her stomach was quite empty, and did not appear to have contained food for a short time previous. The male was killed about ten days afterwards, within a few miles of the same place, and had lived probably during the interval upon the black and red grouse, which are abundant in that district.

GENUS STRIX, AUCT. OWL.

GENERIC CHARACTERS.

Bill strait at the base, with the tip arched, and hooked. Cutting margin of the upper mandible nearly straight; under mandible sloping to the point, and doubly notched. Nostriis oval, obliquely placed on the anterior ridge of the cere. Facial disk large, complete. Auditory conch very large, and furnished with an operculum. Wings long, and ample; the second quill-feather the longest in the wing; the first being very little shorter, equal to the third, and slightly notched on its inner web near the tip. Tail short, and even. Legs having the tarsi long and slender, clothed with downy setaceous feathers; toes thinly covered with hairs; claws long, sharp, moderately curved, and all more or less grooved beneath.

By SAVIGNY and other naturalists, the birds of this genus have been considered the typical representatives of the family; but as our knowledge of the various groups is still so limited, and so little attention has hitherto been given to the peculiar features which must regulate our study, and lead us to their true affinities, it remains a matter of doubt, whether the type will be found to exist in the present genus, or in some of the others, as *Ulula* or *Otus*, in both of which a nearly equal development of the auditory conch, facial disk, and other characteristic points, are to be found. They are birds of strictly nocturnal habits, and are never seen abroad till night-fall. This trait is pointed out to us by the soft and downy plumage with which they are clothed, and is particularly observable in the fabric of their quill-feathers; endowing them with a buoyant and noiseless flight, and enabling them to steal upon their nimble prey, without creating a fatal alarm. Mice and other small mammalia seem to constitute their entire support.

BARN OR WHITE OWL.

STRIX FLAMMEA, Linn.

PLATE XXIV.

Strix Flammea, Linn. Syst. I. p. 133. 8.—*Faun. Suec.* No. 73.—*Gmel.* Syst. I. p. 293.—*Lath.* Ind. Ornith. I. 60. 28.—*Wils. Amer. Ornith.* v. 6. p. 57. pl. 50. fig. 2.

Aluco Flammeus, Flem. Br. Anim. I. 57. No. 29.

Aluco, Briss. I. p. 503. 2.—*Raii* Syn. p. 25. A. 1.

Aluco minor Aldrov. Will. p. 67. t. 13.

Chouette Effraie, Temm. Man. d'Ornith. v. I. p. 91.

L'Effraie ou le Fresiaie, Buff. Ois. v. I. p. 366. t. 26.

Schleyerkauz, Bechst. Naturg. Deut. v. 2. p. 947.—*Meyer,* Tasschenb. Deut. v. I. p. 79.

Die Kirkuil, Sepp. Nederl. Vög. v. 3. p. 399.—*Frisch.* Vög. t. 97.

White Owl, Br. Zool. I. No. 67.—*Arct. Zool.* No. 124.—*Will. (Ang.)* p. 104. t. 13.—*Lewin's Br. Birds,* I. t. 26.—*Lath.* Syn. I. p. 138. 26.—*Id. Sup.* p. 46.—*Mont. Ornith. Dict.* v. 2.—*Don,* Br. Birds, t. 113.—*Pult. Cat. Dorset.* p. 4.—*Bewick's Br. Birds,* v. I. p. 51.

Barn Owl, Shaw's Zool. 7. 258.

PROVINCIAL.—Gillihowlit, Howlet, Madge Owl, Church Owl, Hissing Owl, Screech Owl.

THIS is the most common of the British species, and is found in every part of the kingdom. It is an inhabitant of ruins, church-towers, barns and other buildings, where it is not liable to continual interruption ; and is of essential service in checking the breed of the several species of mice and shrews, upon which it subsists.

Food. On the approach of twilight it may frequently be seen issuing from its retreat to the adjoining meadows and hedge-banks in search of food, hunting with great regularity, and precipitating itself upon its prey with rapidity and unerring aim. This it swallows whole, and without any attempt to tear it in pieces with its claws.

Nest, &c. It breeds in old towers, under the eaves of churches, or in similar quiet places, and sometimes in the hollows of trees, laying from three to five eggs, of a bluish-white colour. The young, when first from the shell, are covered with white down, and are a long time in becoming fully fledged, or in being able to quit the nest. Like the other species of Owls, it ejects the hair, bones, and other indigestible parts of its food, in oval pellets, by the mouth. These castings are often found in great quantities in places where these birds have long resorted.

In its flight it occasionally utters loud screams, and when perched, hisses and snores considerably.

It is an abundant species throughout Europe and Asia, and TEMMINCK says it is the same throughout North America.

It is easily domesticated, and will become very tame when taken young. MONTAGU reared a White Owl, a Sparrow-Hawk, and a Ring-Dove together, who lived in great harmony for six months. They were then set at liberty ; and the Owl was the only one of the three that returned.

PLATE 24. A male bird of the natural size.

General description. Bill straw-yellow ; rather long ; and strait as far as the anterior margin of the nostrils. Auditory conch very

large and defended by an *operculum* of great size. Irides bluish-black. Ruff and facial feathers white; but in some specimens the ruff is of a brownish colour, as is also the lower and inner angle of the eye. Crown of the head, back and wings, ochreous yellow, of lighter or darker shades in different individuals, according to age or sex; the tips of the feathers with fine zigzag lines, and black and white spots. Inner webs of the greater quills white, with four dusky spots, very broad; the barbs having their tips detached, and open; the outer web of the first feather with the tips of the barbs open, distinct, and recurved. First quill-feather rather shorter than the second, which is the longest in the wing; inner web of the first situated near the tip. Wings, when closed, reaching beyond the end of the tail, which is even. Under parts pure white, in some tinged with ochreous yellow, and small brown spots or specks. Tarsi clothed with short downy feathers, with setaceous tips. Toes thinly covered with dirty-white hairy feathers. Claws yellowish-white, the middle one having its inner edge imperfectly serrated; and all of them being more or less grooved beneath.

GENUS ULULA, CUV. HOWLET.

GENERIC CHARACTERS.

Bill nearly strait at the base; the tip hooked; with a rounded culmen, cutting margin of the upper mandible having a small lobe or sinuation near the middle. Facial disk large and complete, auditory conch rather large, and defended by an operculum. Wings short, rounded, concave; the first quill-feather very short; the fourth the longest in the wing, with the third and fifth nearly equal to it. Tail reaching beyond the closed wings, rounded, bent, and concave beneath. Legs having the tarsi plumed; and the toes

more or less so. Claws moderately curved, long, sharp, all more or less grooved beneath.

The genus *Ulula* was restricted by CUVIER to *Strix nebulosa*, and *Str. litterata* of authors; allowing *Strix stridula* to remain as the type of SAVIGNY's genus *Syrnium*. But as the characters of the latter are equally applicable to the other, and their habits are similar, I have ventured to include the whole under one generic head. They are nocturnal feeders, and are the inhabitants of woods and forests; preying upon birds, animals, and sometimes fish. Their flight is slow, but buoyant; their wings being broad, but short, and much rounded. Their quills are strongly notched, as in the *Butconine* subfamily of the *Falconidae*. They are all birds of considerable size and power.

TAWNY OWL.

ULULA STRIDULA, Mihi.

PLATE XXV.

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| Synonyms of Old Male. | <i>Syrnium stridulum</i> , <i>Shaw's Zool.</i> 13. 62. <i>Strix Aluco</i> , <i>Meyer, Tasschenb. Deut.</i> v. 1. p. 76. <i>Chouette Hulotte</i> , <i>Temm. Man. d'Ornith.</i> 1. p. 89. <i>Nacht-kaute</i> , <i>Bechst. Naturg. Deut.</i> v. 2. p. 910. Tawny Owl, <i>Mont. Ornith. Dict.</i> — <i>Bewick's Br. Birds.</i> <i>Strix Aluco</i> , <i>Linn. L.</i> p. 130. 7.— <i>Gmel. Syst.</i> 1. p. 292. sp. 7.— <i>Lath. Ind. Ornith.</i> 1. p. 59. 26. <i>Ulula</i> , <i>Briss. L.</i> p. 507. 3.— <i>Will.</i> p. 68. t. 13. <i>Aluco</i> , <i>Will.</i> 68.— <i>Id. (Ang.)</i> p. 104. t. 13. <i>La Hulotte</i> , <i>Buff. Ois. v. 1.</i> p. 358.— <i>Id. Pl. Enl.</i> 441. <i>Aluco Owl</i> , <i>Lath. Syn.</i> p. 134. 20. <i>Brown Owl</i> , <i>Penn. Br. Zool. No. 69.</i> t. 32.— <i>Lewin's Br. Birds</i> , 1. t. 28. |
| | <i>Strix stridula</i> , <i>Linn. Syst.</i> 1. p. 133. 9.— <i>Gmel. Syst.</i> 1. p. 133.— <i>Lath. Ind. Ornith.</i> 1. p. 58. 25. |
| | <i>Strix Aldrov.</i> <i>Raii Syn.</i> p. 25. A.— <i>Will.</i> p. 65. t. 14. |
| | <i>Le Chat-huant</i> , <i>Buff. Ois. 1.</i> p. 362. t. 25.— <i>Pl. Enl.</i> 437. |
| | <i>Common Brown or Ivy Owl</i> , <i>Will. (Ang.)</i> p. 102. t. 14. |
| | <i>Tawny Owl</i> , <i>Br. Zool. 1. No. 68.</i> — <i>Lewin's Br. Birds</i> , 1. t. 27.— <i>Lath. Syn.</i> 1. p. 139. 27. |
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| Synonyms of Female. | |
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PROVINCIAL—Jenny Howlet, Ivy Owl, Wood Owl.

As no doubt appears to be entertained now by ornithologists respecting the identity of the *Brown* and *Tawny* Owl, and it being satisfactorily ascertained that the difference in the colour of the plumage is merely sexual, I have brought their synonyms together. Next to the White or Barn Owl, it is the most abundant of the British species, and is, like the former, generally dispersed throughout the kingdom; but is most readily to be met with in well wooded districts, as it takes up its abode in woods and thick plantations, preferring those which abound in firs and holly, or ivy bushes. In such situations it remains concealed till night-fall, as it is very impatient of the glare of day, and sees, indeed, imperfectly during that time.

It builds in the cavities of old trees, or will occupy the Nest, &c. deserted nest of a crow, and produces four or five white eggs, of an elliptical shape.

The young, on their exclusion, are covered with a greyish down, and are easily tamed, when fed by the hand; but MONTAGU observes, that if placed out of doors, within hearing of their parents, they retain their native shyness, as the old birds visit them at night and supply them with abundance of food. They prey upon rats, mice, moles, rabbits, Food. and young leverets, and are sometimes destructive to pigeons, entering the dovecots, and committing great havoc.*

At night this species is very clamorous, and is easily to be known from the others by its hooting, in the utterance of which sounds its throat is largely inflated.

PLATE 25. Natural size.

Bill yellowish-white. Irides bluish-black. Facial feathers General white, tinged and barred more or less with brown. The ^{descrip-} _{tion.} circle of small feathers surrounding the face white, spotted with yellowish-brown and black. Upper parts of the

* It is also ascertained that they sometimes prey upon fish. See Observations by the Rev. Mr BREE of Allesly, in "LOUDON'S Magazine of Nat. History."

plumage spotted, and marked with umber-brown, black, and ash-grey, upon a ground of wood-brown colour. Scapulars and wing-coverts, with large white spots, forming indistinct rows. Under parts yellowish-white, with transverse bars of reddish-brown ; the shafts of the feathers being dark umber-brown. Quills buff-orange, barred with brown. The fourth quill-feather the longest. First four quills having their inner webs emarginated ; and, as far as the sixth, with their outer webs sinuated. Wings, when closed, not reaching to the end of the tail by two inches. Tail barred alternately with wood and umber browns, except the middle feathers, which are plain wood-brown. Legs thickly clothed with downy feathers, of an ash-grey colour, speckled with brown. Claws long and sharp, greyish-black.

The males have the ground colour of the plumage much redder ; and scarcely two individuals can be found precisely similar in the markings.

GENUS NOCTUA, CUV. NIGHT-OWL.

GENERIC CHARACTERS.

Bill bending from the base, much curved. Cere short ; nostrils oval, placed in the anterior part of the cere. Auditory conch large, with a narrow operculum. Facial disk complete. Wings of mean length, ample and rounded ; the third and fourth quills nearly equal, and the longest in the wing. Inner webs of the first primaries notched. Tail slightly rounded, and longer than the closed wings. Legs having the tarsi and toes more or less feathered. Claws moderately incurved ; the inner and middle one grooved beneath ; the outer and hind claws nearly cylindrical. General plumage very soft and downy ; the barbs of the feathers open and very fine.

The members of this genus are of diminutive size, and of strictly nocturnal habits, as indicated by the form and structure of the ear. They have a near resemblance to each other in the prevailing colour and disposition of their plumage; and are found disseminated in a great variety of latitudes and climates. They prey upon mice and other small mammalia, as well as insects; and their flight, like the other nocturnal species, is buoyant and noiseless.

TENGMALM'S NIGHT-OWL.

NOCTUA TENGMALMI, Mihi.

PLATE XXVI.

Strix Tengmalmi, Gmel. Syst. 1. 291.—Lath. Ind. Ornith. 1. 64. sp. 42.—Faun. Amer. Boreal. 2. 94. No. 26. pl. 32.
Strix funerea, Linn. Faun. Suec. 25. sp. 75.
Strix dasypus, Bechst. and Meyer, Temn. Man. d'Ornith. 1. 94.
Chouette Tengmalm, Temm. Man. d'Ornith. 1. 94.
Rauchfüssiger Kauz. Meyer, Vög. Deut. Heft. 6, male and female.
Tengmalm's Owl, Selby, Cat. in Trans. of Nat. Hist. Soc., Northumberland, Durham, and Newcastle, v. 1. 248.—North. Zool. 2. 94. pl. 32.
New species of Owl, Penn. Arct. Zool. 2. Suppl. 60.

I HAVE now great satisfaction in correcting an error committed at the time the figures contained in the first part of the "Illustrations of British Ornithology," and the first edition of the present accompanying volume, were published; where, from the want of specimens to make the necessary comparison, I had figured and described an Owl under the title of *Strix Passerina*, *Linn.*, which, upon further investigation, proves to be a different, although nearly allied, kind, and known by the specific name of *Strix Tengmalmi*. The specimen from which my figure was taken still remains in my collection, and was killed near to Morpeth in Northumberland in 1812; a fact that, independent of the capture of others since that period (which I believe to have occurred), entitles it to be placed upon the list of our fauna as a rare Rare visitant.

visitant. In size it nearly equals *Noctua Passerina*, which it also resembles in the disposition of its feathers, but is less spotted with white, and the dark part of the plumage approaches nearer to that shade known by the name of *Liver-brown*. The shorter tarsi and *thickly* feathered toes are also distinguishing characters, as well as the black facial feathers, between the bill and eye-orbits; and those which proceed from the posterior angle of the eye, with the belt of velvety feathers immediately behind the auditory opening. The tail is also longer in proportion to its size, and the bird altogether exhibits a more lengthened form. In Europe it is widely distributed through the northern and eastern parts, being found in Sweden, Norway, Russia, and parts of Germany, inhabiting the thick and extensive pine forests. In North America, according to Dr RICHARDSON, it has a wide range, embracing all the woody country from the great Slave Lake to the United States. Its cry he describes as a single melancholy note, repeated, at an interval of a minute or two, during the greater part of the night; at which time also it is in activity, for, when roused by day, it is so much dazzled and distressed by the glare of the sun, as to be easily caught Nest, &c. by the hand. It breeds in the holes or clefts of pine trees, Food. and lays two white eggs. Its food consists of mice and insects, particularly those of the coleopterous kind. The plumage, like that of other night-flying species, is very soft and downy.

PLATE 26. represents this bird of the natural size.

Bill much curved and compressed; the culmen and tip yellowish white; the sides dark grey. Facial disk black at the posterior and anterior angles of the eye-orbits; the rest greyish-white, mixed with black. Ear conch large, with a narrow operculum. Velvety feathers behind the auditory opening, brownish-black. Crown, nape, and hind part of the neck, liver-brown, spotted with white; those upon the latter part large,

and surrounded by a margin of liver-brown. Back, wing-coverts, and scapulars, liver-brown, spotted with white; the spots upon the mantle nearly concealed by the overlaying tips of the feathers. Quills liver-brown; their exterior webs having three or four oval white spots, forming imperfect bars. Points of the outer barbs of the whole of the first quill open and reverted; those of the second the same for one-half of its length; of the third a small portion only near the tip. Third and fourth quill-feathers the largest in the wing; the third rather exceeding the fourth. The first and second having their inner webs notched, the second and third with their *outer* webs sinuated. Tail, extending nearly an inch beyond the closed wings, liver-brown, crossed by five interrupted white bars, or rather rows of spots, the last about half an inch from the tip. Under plumage white, varied with paler liver-brown. Legs having the tarsi short, and, as well as the toes, thickly clothed with soft hair-like feathers. Claws of a tolerable length, and moderately incurved.

LITTLE NIGHT-OWL.

NOCTUA PASSERINA, Mihi.

PLATE XXVII.

Strix Passerina, *Linn. Syst.* 1. 133. 12.—*Gmel. Syst.* 1. 296. sp. 12.—*Lath.*
Ind. Ornith. 1. 65. sp. 46.
Noctua minor, *Raii*, *Syn.* 26. 6.—*Will.* 69. t. 13.—*Briss.* 1. 514. 5.
Chouette Chevêche, *Temm. Man. d'Ornith.* 1. 92.
La Chevêche ou Petit Chouette, *Buff. Ois.* 1. 78.
Strix nudipes, *Nils. Orn. Suec.* 1. 68. sp. 30.
Kleiner-kauz, **Bechst. Naturg. Deut.* 2. 963.—*Meyer, Tasschenb. Deut.* 1.
p. 80.
Little Owl, *Br. Zool.* 1. No. 70.—*Arct. Zool.* 2. No. 126.—*Lewin's Br.*
Birds, 1. t. 39.—*Will. (Ang.)* 105. t. 13.—*Lath. Syn.* 1. 150. 40.—*Mont.*
Ornith. Dict. and Supp.—*Bewick's Br. Birds?* sp. t. 65.?

This species, like the preceding, can only be viewed in the

Occasional light of an occasional visitant, though the instances of its visitant capture are more numerous, at least if we judge from those which have been recorded under the name of *Strix Passerina*. The great resemblance between the two species may, however, in some instances, have been the means of one being confounded with the other ; and I almost suspect BEWICK to have been thus misled, as his description and figure of the *Little Owl* agree better with TENGMALM's Owl than with the true *N. Passerina*. According to TEMMINCK, the present species is rarely found in Europe beyond the 55° of N. Latitude ; but in the warmer regions of this quarter of the globe is very common. It inhabits ruins, church towers, and other buildings, as well as the recesses of the forest ; and in such situations it also breeds. Its eggs are from two to four in number, and, like those of the rest of the Strigidae, white, and of a rounded shape. It is a nocturnal species, during the day remaining concealed and at rest ; but as soon as the sun sinks below the horizon, it becomes very active, and its appearance and manners then awaken great interest. Its disposition is wild and fierce, and, according to SPALLANZANI, not capable of being tamed, like the Little-eared or Scops-Owl. It is, however, frequently taken young, and appears to be easily reared, as I have repeatedly met with these birds for sale in Flanders and France, confined in large wicker cages, where they looked at ease and in good condition.

Food. Its food consists of mice, shrews, &c. ; also of small birds, which it takes at roost ; and of insects, such as locusts and beetles.

PLATE 27. represents a male bird of the natural size, from a British specimen.

Bill much hooked, the sides rather convex, and of a pale yellowish colour. Facial disk not so complete or full as in *Noc. Tengmalmi*, mostly white ; the shafts of some of the bristly feathers covering the bill black ; the posterior part with the barbules blackish-brown. Fea-

thers behind the disk white, varied with brown. Chin white, below which is a circle of yellowish-brown feathers, with darker bars; to which succeeds another broad circle or collar of white. Crown and nape of the neck dark brown, with the central part of the feathers white, and forming guttated spots. Hind part of the neck with large white spots, and forming a broad angular band. Back and wings liver-brown, with a grey tinge, each feather being spotted with white; which spots are surrounded with pale yellowish or buff. Wings having the outer webs of the quills with irregular bars of yellowish-white; third and fourth quill-feathers of nearly equal length, and the longest in the wings. The first quill with the points of the outer barbs reverted. The first, second, third, and fourth, with the inner webs deeply notched; the second, third, fourth, and fifth, with their outer webs sinuated. Tail brown, with four bars of yellowish-white; the last being close to the tip. Legs having the tarsi longer than in *Noc. Tengmalmi*, and clothed with short downy white feathers. The toes only thinly covered with white hairy feathers, and exposing two scales at the extremity of each toe. In the *under plumage* the breast and belly are white, clouded and spotted with deep liver-brown; and the abdomen and under tail-coverts white.

ORDER II.

INSESSORES, *VIGORS.*

THE Insessores, or Perching Birds, form the second and pre-eminently typical order of the class, comprehending all that vast assemblage of species distinguished by LINNÆUS and others under the separate orders *Picæ* and *Passeres*. This division of the earlier systematists is entirely artificial, being instituted without any due regard to the true affinities of the species. As such, it has been rejected by CUVIER,* who declares his inability to detect any character of distinction either internal or external, which can warrant so absolute a separation ; and VIGORS, SWAINSON, and other eminent ornithologists of the present day, have shown that an unbroken chain and circular succession of affinities does exist throughout the whole of these birds ; and that the subordinate groups into which the order is divisible (complete as each may appear within itself), are too intimately connected with each other, to admit of a separation so absolute as that adopted by LINNÆUS and his followers. In an order of such extent, and which contains so great a variety of form, a considerable difficulty has been experienced in selecting characters sufficiently comprehensive to define it. On this account, some have merely assigned to it absence of certain qualities, as contrasted with the other orders ; but Mr SWAINSON† has pointed out three distinct characters, two of which he considers as universal, and the third as especially applicable to

* In the "Regne Animal," he observes in a note, " Malgré tous mes efforts, il m'a été impossible de trouver, ni à l'extérieur, ni à l'intérieur, aucun caractère propre à séparer des passereaux aux des genres compris parmi les *Picæ* de LINNÆUS, qui ne sont pas grimpeurs."

† See Northern Zoology, vol. ii. p. 100, &c.

the more typical groups of these. The “first is, feet of that construction most adapted for perching or grasping, the hind toe always present, and articulated upon the same plane with the fore toes; second, the absence of the strongly defined tooth which gives to the Rapacious birds the exclusive power of tearing or dividing their food previous to swallowing it; and, thirdly, by the presence in the typical groups of a small notch on one or both mandibles, enabling the bird to hold, but not divide its food, which is swallowed in a whole state.” In addition to these distinctions of external form, it may be observed, that the Insessorial birds possess a greater volume of brain as compared with the other orders, and an intelligence proportionally superior; indicating in this respect also the typical superiority they hold in this class of the animal kingdom. The five primary tribes or divisions of the order have long been recognised by CUVIER, ILLIGER, and other eminent naturalists, and are now universally adopted. These are the *Fissirostres*, *Dentirostres*, *Conirostres*, *Scansores*, and *Tenuirostres*.* Of these the Dentirostres and Conirostres are the typical tribes, being distinguished by their more perfect construction, and the possession of qualities of which the others are destitute, or in which they exist only in a limited degree. Each tribe is again divisible into circular groups of subordinate value, distinguished as families, sub-families, and genera, which last may be considered as the lowest on the scale.

TRIBE I. FISSIROSTRES, CUV.

The Fissirostres are distinguished from the more typical tribes by the weak conformation of their legs and feet, by the width of their *rictus* or gape (the bill being always broad

* I have here to observe, that throughout this work, the arrangement adopted by MR VIGORS, of placing the more perfect or typical forms in the centre, and the aberrant on each side, has been pursued.

at the base), and their habit of feeding upon wing. This latter quality, however, as well as the weak structure of the legs, are also met with in the typical families of the Tenuirostres, the tribe which meets the present one at the other extremity of the order; but a remarkable difference in the mode of feeding effectually distinguishes the members of each; this being accomplished in the Fissirostral tribe by the bill alone, whereas in the typical Tenuirostral birds, it is taken by the instrumentality of the tongue. The nature of their respective food is also dissimilar in the Fissirostres (with the exception of the *Trogonidæ*) being confined to animal matter, and principally that of the insect world. In the Tenuirostres it is chiefly derived from vegetable juices and fruits. The families of which the present tribe is composed are, as usual, five; which (though presenting among themselves a great diversity of structure) are all partakers in a greater or less degree of its distinguishing characters. They are named the *Meropidæ*, *Hirundinidæ*, *Caprimulgidæ*, *Trogonidæ*, and *Halcyonidæ*. Of these the Hirundinidæ and Caprimulgidæ are the typical groups, as in them we find the fullest development of the peculiar characteristics of the tribe.

FAMILY I. MEROPIDÆ.

THE members of this aberrant family, are mostly natives of the warmer climates of the ancient world, and are noted for the beauty of their plumage, consisting in general of shades of green, blue, yellow, and rich browns. In the form of their feet, they are nearly allied to the Halcyonidæ, which stand at the farther extremity of the tribe, and in other parts of their structure a connexion is kept up with the *Promeropidæ* of the Tenuirostral tribe, as well as with other members of the Insessorial order. The typical genera possess a full development of wings and tail, and in consequence are

birds of active and powerful flight, and obtain the whole of their food in the air, consisting of insects, particularly those of the Hymenopterous order. In the genus *Nyctyornis* (of SWAINSON), the members of which (like the Caprimulgidae) feed during twilight and night, the wings become shortened and rounded, and the body, as he observes, if the distinguishing characters of the head were hidden, might be supposed to belong to the Motmots (*Prionites*), a genus of birds belonging to the family of the *Buceridæ* in the conirostral tribe of the order, thus becoming a link to connect the members of these tribes. Of the various forms belonging to this family, we possess but two examples, viz. a single species of the genus *Merops*, and another of the genus *Coracias*, both of which are recognised in our Fauna as occasional visitants.

GENUS MEROPS, LINN. BEE-EATER.

GENERIC CHARACTERS.

BILL rather long, slightly curved, sharp pointed, subquadrangular, and carinated. Nostrils basal, lateral, oval, and open, partly hidden by reflected bristles. Feet having the tarsus short, with three toes before, and one behind, the outer toe being joined to the middle one as far as the *second* joint ; the inner one the same, as far as the *first*. Claws small, curved ; that of the hind toe the smallest. Wings long, acuminate ; having the first quill very short, the second being the longest.

This genus of birds take their food, consisting of bees, wasps, &c. upon the wing, like swallows. They breed in the banks of rivers, in which they dig holes to a considerable depth. They are totally natives of the warmer parts of the ancient continent. Like the King's-fishers, their plumage is brilliant, the prevailing colours being blues and greens of various shades, and tinged by beautiful reflected lights.

COMMON BEE-EATER.

MEROPS APIASTER, Linn.

PLATE XLI.

Merops Apiaster, Linn. Syst. 1. p. 182. 1.—*Gmel.* Syst. 1. p. 460.—*Lath.* Ind. Ornith. v. 1. p. 269. 1.—*Raii* Syn. p. 49. 3.—*Will.* p. 102. t. 24.—*Briss.* 4. p. 582.

Merops Chrysocephalus, Lath. Ind. Ornith. v. 1. 273. 11.

Merops Galilaeus, Hassel. It. 247.

Le Guepier, Buff. Ois. v. 6. p. 480. t. 23.—*Id.* Pl. Enl. 938.—*Le Vaill.* Ois. de Parad, et Fromer, v. 3. pl. 1. and 2.

Le Guepier vulgaire, Temm. Man. d'Ornith. 1. p. 420.

Bienfresser, Bechst. Naturg. Deut. v. 2. p. 1099.—*Meyer,* Tasschenb. Deut. 1. p. 132.—*Id.* Vög. Deut. v. 1. t. Heft. 10. male and female.—*Frisch,* Vög. t. 221. the female, t. 222. male.

Yellow-throated Bee-Eater, Lath. Syn. v. 2. p. 678.

Common Bee-Eater, Will. (Ang.) p. 147.—*Albin.* 2. t. 44.—*Linn.* Trans. 3. p. 333.—*Lath.* Syn. 2. p. 667.—*Id.* Supp. p. 119.—*Mont.* Ornith. Dict.—*Id.* Supp.—*Shaw's Zool.* 8. p. 152.—*Bewick's Br. Birds*, ed. 1826, p. t. 146.

Occasional
visitant.

OF late years, several individuals of this species have been killed in England; which facts authorise me to include it in the list of the British birds, as an occasional visitant.—It is met with, during the summer months, in various parts of the European Continent, viz. in the southern districts of France and Germany, in Spain, Italy, Sicily, and Sardinia. It is very numerous along the southern borders of Russia, particularly upon the Don and the Wolga, in the banks of which rivers it breeds, digging long horizontal holes for that purpose.—The nest is composed of moss, and other soft materials; and the eggs, of a pure white, are from five to seven in number. Upon the approach of autumn, these birds assemble in large flocks, and depart for more southern latitudes.

Nest, &c.

FOOD. The food of the Bee-Eater consists of that tribe of insects from whence its name has been bestowed, as well as other winged insects, all of which it captures during its flight, like the Swallow. On the wing its motion is rapid, and its con-

tour and appearance are light and elegant. The specimens from the Cape of Good Hope are precisely similar to the individuals killed in Europe.

PLATE 41. Represents a male and female bird of this species, in the natural size.

Form typical. Bill black, forehead white, passing into General pale verdigris-green. Crown of the head, nape of the neck, and upper part of the back, deep orange-coloured Male bird. brown. Lower part of the back, and upper tail-coverts, saffron-yellow, passing into gallstone-yellow. Lesser wing-coverts bright grass-green; greater coverts pale orpiment-orange. Outer webs of the quills and tertials fine greenish-blue; in some shades greyish-blue. Tail greenish-blue; the two middle feathers darker, elongated, and pointed. From each corner of the mouth runs a black streak, passing the eyes, and through the ear-coverts, which, at its posterior extremity, joins a narrow black ring, that encircles the neck. Throat bright king's-yellow. Breast and belly greenish-blue. Legs very short of a blackish-brown colour. Irides red.

The colours of the female are not so bright in tint as those Female. of the male.

GENUS CORACIAS, LINN. ROLLER.

GENERIC CHARACTERS.

Bill cultrated, higher than broad, compressed, and strait; the upper mandible bent at the point. Gape wide. Nostrils in the base of the bill, linear, and lateral, pierced diagonally, and partly covered by a feathered membrane. Wings long, acuminated, having the first quill shorter than the second, which is the longest in the wing. Tarsus shorter than the middle toe. Feet having three toes before and one behind; toes entirely divided. Claws falcate, and sharp.

Of this genus only one species occurs in Europe.

They are all remarkable for beauty of plumage, and the prevailing colours are blues of different intensity, generally associated with purples and brilliant greens. They are wild insociable birds, and live in the retirement of the thickest forests.

Their food principally consists of insects. In many species the males are adorned by an elongation of the two outer tail-feathers.

The Rollers were arranged, by former systematists, in close connection with the crows and other birds of the Linnean order *Picæ*; and Mr VIGORS in a paper, "On the Arrangement of the Genera of Birds," (published in the Zoological Journal) has also made the genus *Coracias* the type of a group in the family of *Corvidæ*, although he has placed the members of the genus *Colaris*, most closely related to it, not only in a different *family*, but in a distinct and distant *tribe*. From an examination of the several species belonging to the genus, I have little hesitation in removing it from the *Corvidæ* (to which it bears only a relationship of analogy), and placing it, together with *Colaris*, &c. in the tribe of *Fissirostres*, a station also given to it by one of the most distinguished ornithologists of the present day *. I have provisionally placed it, as an aberrant form, amongst the *Meropidæ*, as a further examination may evince the propriety of its transference to the *Halcyonidæ*, belonging to the same tribe, and meeting the *Meropidæ* at the other extremity of the circle.

* See MR SWAINSON's remarks on the *Corvidæ*, in the Second Volume of "Northern Zoology," page 289.

GARRULOUS ROLLER.

CORACIAS GARRULA, Linn.

PLATE XXXIV.

- Coracias garrula, Linn.* Syst. 1. p. 159. 1.—*Fauna Suec.* No. 94.—*Gmel.* Syst. 1. p. 378.—*Lath.* Ind. Ornith. 1. p. 168. 1.
Galgulus, Briss. 2. p. 64. 1. t. 5. f. 2.
Cornix coerulea, Gesneri, Raii Syn. p. 42.—*Will.* p. 35.
Pica marina, Raii Syn. p. 41.—*Will.* 89.
Garrulus argentoratensis, Raii Syn. 41.—*Will.* 89.
Le Roller, Buff. Ois. v. 3. p. 135. t. 70.—*Id. Pl. Enl.* 486.
Rollier vulgaire, Temm. Man. d'Ornith. v. 1. p. 127.
Blaue-Racke, Meyer, Tasschenb. Deut. v. 1. p. 106.—*Frisch, Vög.* t. 57.
Roller, Br. Zool. App. t. 2.—*Will.* (Ang.) 131. t. 20.—*Arct. Zool.* 2. p. 235.
 —*Lewin's Br. Birds,* 2. t. 42.—*Lath. Syn.* 1. p. 406. 1.—*Id. Suppl.* p. 85.
 —*Mont. Ornith. Dict.*—*Walc. Syn.* 1. t. 41.—*Bewick's Br. Birds,* 1. t. 85.

As a few accidental stragglers of this species have at different times been taken in Great Britain, I have been induced to admit it into the list of the British Fauna. The figure accompanying this work was drawn from a specimen now in the Edinburgh Museum, and which was killed at Dunkeld a few years ago. I had also an opportunity of examining another (a female bird) that was found dead in a plantation at Howick House in Northumberland, the seat of Earl GREY *. In Germany it is very common, inhabiting the oak forests of that country; and is also numerous in many parts of Sweden and Denmark.—It builds in the holes of decayed trees, and Nest, &c. lays from four to seven eggs of a clear bluish-white.—Grass- Food. hoppers, snails, millepedes, and other insects, are its principal food. It is a bird of restless and fierce disposition, and very clamorous.

* June 19. 1823. A specimen of the Roller was sent to me by Mr GOOD, that was taken on board a vessel bound from America to the Port of Berwick, but in what latitude I did not learn. It appeared to be a male from the brilliancy of its plumage, but was not in a state to admit of the fact being ascertained by dissection.

A specimen of the present species is now in the possession of Sir Wm. JARDINE; killed at Orkney in 1827, and sent to him as a curious kind of Duck. *ff. Scot.*

PLATE 34. Natural size.

General description.

Bill yellowish-brown at the base, the tip black. At the base of the bill are a few black bristles. Irides yellowish-brown. Behind each eye is a small bare tubercle. Head, neck, breast, and belly verditer-blue, in some parts inclining to verdigris green. Back and scapulars reddish wood-brown. Smaller wing-coverts rich auri-cula-purple, those next to them pale ultra-marine blue. Basal part of quills plum-purple. The tips dusky. Rump purple. Tail consisting of twelve feathers, the outermost (elongated in the male bird) pale ultra-marine blue, tipped with black ; the rest blackish-green. Legs wood-brown.

FAMILY II. HIRUNDINIDÆ.

In this typical Family, the fissirostral characters, as might be expected, are found existing in a pre-eminent degree ; the gape being very extensive, (the commissure reaching as far as the posterior angle of the eye), while the external or prominent part of the bill is short and weak ; the wings being much produced, narrow, and acuminate, and the tail generally more or less forked, characters indicative of a swift and strong flight. The legs, in accordance with the little use made of them in progressive motion, are always short, and generally weak ; but the toes are furnished with sharp and hooked claws, which in some genera are of great strength, enabling them to grasp and adhere to the perpendicular faces of rocks, buildings, hollows of trees, and other places where they habitually roost and breed. They are widely disseminated over the globe, and are met with in almost all climates at certain periods of the year, most of the genera being of migratory habits. They prey upon insects, which they capture upon wing ; some few are also stated to devour berries occasionally, and in such we observe a greater strength and

length of bill, approaching in shape to that of some of the *Ampelidae* of the Dentirostral tribe. Their nidification is curious, many of the genera forming the receptacle for their eggs of mud or clay, others of extraneous matters, agglutinated by a viscous liquid, provided from a glandular apparatus peculiar to such species *. During their migratory movements they fly in immense flocks, and also frequently breed in large societies.

GENUS HIRUNDO, LINN. SWALLOW.

GENERIC CHARACTERS.

Bill short, much depressed, and wide at the base; upper mandible bent at the tip, and carinated. Gape extending as far backwards as the eyes. Nostrils basal, and oblong, partly covered by a membrane. Feet having the tarsi short, toes slender, three before and one behind; the outer toe united to the middle one, as far as the first joint. Tail of twelve feathers, generally forked. Wings long and acuminate, the first quill-feather being the longest.

The species of this genus are very numerous, and are spread throughout every part of the globe. Their food consists entirely of winged insects, which they seize with great dexterity during their flight. That flight is very rapid and buoyant, and is supported for a long time, without visible fatigue. The nidification of many of the genus is curious and peculiar; the exterior coat of the nest being compact and hard, generally formed of clay, or earthy materials; and the inner part lined with feathers and other soft substances. They moult but once in the year, which takes place in *Fc-*

* The nests of some exotic species, almost entirely formed of this viscous matter, are highly esteemed as a condiment by the Chinese and other Eastern nations.

bruary, and proves the impossibility of the hybernation of these birds.

The British species are migratory.

CHIMNEY SWALLOW.

HIRUNDO RUSTICA, Linn.

PLATE XLII. FIG. 1.

Hirundo rustica, Linn. Syst. 1. p. 343. 1.—*Gmel.* Syst. p. 1015.—*Lath.* Ind. Ornith. v. 2. p. 572.

Hirundo domestica, Rau Syn. p. 71. A. 1.—*Will.* p. 155. t. 39.—*Briss.* 2. p. 486. 1.

Hirondelle de Cheminée ou domestique, Buff. Ois. v. 6. p. 591. t. 25. f. 1.—*Id. Pl. Enl.* 543. f. 1.—*Temm.* Man. d'Ornith. v. 1. p. 427.

Die Rauch Schwalbe, Bechst. Naturg. Deut. v. 3. p. 902.—*Meyer*, Tasschenb. v. 1. p. 276.

Chirney or Common Swallow, Br. Zool. 1. No. 168. t. 58.—*Arct. Zool.* 2. No. 330.—*Will.* (Ang.) p. 212.—*Albin.* 1. t. 45.—*Lewin's Br. Birds*, 3. t. 123.—*Lath. Syn.* 4. p. 561.—*Id. Supp.* p. 192.—*Mont. Ornith. Dict.*—*Id. Sup.*—*Bewick's Br. Bird*, 1. p. t. 261.—*Low's Faun. Orcad.* p. 73.—*Shaw's Zool.* v. 10. p. 84.—*Walc. Syn.* 2. t. 251.—*Pult. Cat. Dorset*, p. 13.

THE Chimney Swallow generally makes its appearance in the south of England early in April, but is seldom seen in the northern counties, or in Scotland, before the middle or latter part of that month. After incubation, and when the young birds have acquired sufficient strength to undertake their long journey, which is the case about the end of September, they prepare for their migration to the warm regions of Africa, where they pass the hyemal months. I consider it unnecessary, in the present advanced state of knowledge, to offer many observations on the once prevalent notion of the hybernation of Swallows in this country, as the wonderful laws which regulate the migration of birds are alone sufficient to account for the phenomena of their appearance and disappearance at stated periods. From the experiments made, it appears that the Swallows which have been kept in confinement regularly moulted in *February*,—a fact totally

Periodical
visitant.

at variance with the idea of the bird going into such a torpid state as has been represented, and sufficient to prove the improbability, nay, I may say impossibility, of such an event.

Let it be admitted, that a few individuals may, at different times, have been found in a half-dead or benumbed state, under the eaves of houses, or in similar places of retreat, (the natural consequence of remaining in an uncongenial climate), such will, doubtless, have been young birds of late hatchings, not able to undergo the fatigue of so long a flight, or old birds, reduced by sickness and other casualties to a similar condition ; and all of which, I should be strongly inclined to believe, die before the expiration of the winter. As a proof that the circumstances may happen, I adduce two instances of having found this bird in the months of December and February, both of which individuals appeared to have recently died.

The food of the Swallow consists entirely of insects, which it takes with great dexterity on the wing. During the summer, the scenery of the margins of rivers, and the quiet surface of lakes and other pieces of water, are enlivened by the busy flight of this, and the other species of Swallow, attracted by the swarms of winged insects that are always found in such situations. When feeding, it flies with the mouth extended, and the capture of its prey is attended with a snap of the bill, audible by an attentive ear. It drinks also, and frequently bathes, whilst on wing.

In England, this species generally breeds in chimneys, whence arises its English specific name ; sometimes in out-houses ; and where coal-pits abound, its habitation may frequently be seen fixed against the side of a deserted shaft.—The nest is open at the top, and formed of clay or mud, Nest, &c. lined with feathers, and other soft materials. The eggs are white, speckled with reddish-brown, and are four or five in number. These birds begin to build soon after their arrival, and produce two broods in the year, one of which flies in June, and the second about the middle or latter part of

August. The young, after quitting the nest, are fed for some time on wing by the parent birds, which is effected with great celerity, and only to be seen by a very attentive observer. Previous to migration, Swallows collect in immense flocks, and may be seen thus upon house-tops, roofs of churches, or upon trees by the sides of rivers or ponds; which latter situation is selected, not for the purpose of retiring into the water to hibernate, as occasionally asserted, but on account of the plentiful supply of food afforded by such situations.

PLATE 42. Fig. 1. Natural size.

General description.

Bill black. Forehead and throat deep orange-brown. Sides of the neck, back, wings, and pectoral band, black, with blue reflections. Tail deeply forked, the two outer feathers long and pointed; a large white spot on the inner webs of all the feathers, except the two middle ones, which are entirely black. Belly and vent reddish-white, more or less tinged with reddish-brown. The female has rather less of the orange-brown on the forehead. The black is less brilliant, and the two outer tail-feathers are rather shorter than in the male bird. The young do not acquire the long tail-feathers till after the first moult.—White varieties are sometimes to be met with. A specimen, taken at Acton in Northumberland, is in my possession, which is of a pure white above, with the chin and under parts reddish-white.

MARTIN.

HIRUNDO URBICA, Linn.

PLATE XLII. FIG. 2.

- Hirundo urbica, Linn.* Syst. 1. p. 344. 3.—*Gmel.* Syst. 1. p. 1017. sp. 3.—*Lath.* Ind. Ornith. v. 2. p. 573. sp. 3.—*Fau.* Suec. 1. No. 271. 1.
Hirundo rustica sive agrestis, Raii Syn. p. 71. A. 2.—*Will.* p. 155. t. 39.
—*Briss.* 2. p. 490. 2.
Hirondelle à Cul-blanc ou de Fenêtre, Buff. Ois. v. 6. p. 614. t. 25.—*Id.*
Pl. Enl. p. 542. f. 2.
Hirondelle de Fenêtre, Temm. Man. d'Ornith. v. 1. p. 428.
Housschwalbe, Bechst. Naturg. Deut. v. 3. p. 915.—*Meyer,* Tasschenb.
Deut. v. 1. p. 277.—*Frisch.* t. 17. f. 2.
Martin or Martlet, Br. Zool. 1. No. 169.—*Arct. Zool.* 2. No. 331.—*Albin.*
2. t. 56.—*Lewin's Br. Birds,* 3. t. 123.—*Will.* (Ang.) p. 212. t. 39.—*Lath.*
Syn. 4. p. 564. 3.—*Id.* Sup. p. 192.—*Mont. Ornith. Dict.*—*Id.* Sup.—*Walc.* Syn. 2. t. 251.—*Pult.* Cat. Dorset. p. 13.—*Bewick's Br. Birds,* v. 1.
t. 261.—*Low's Fau.* Oread. p. 73.—*Shaw's Zool.* v. 1. p. 84.

THE first appearance of the Martin in this country is a Periodical few days after the preceding species, and, on its first arrival, *visitant.* it is usually seen in warm and low situations; such being most likely to furnish a full supply of its natural food. It is very generally dispersed throughout the kingdom, and is found wherever man has fixed his residence, seeming to court his protection. It commences nidification early in May, if the weather proves favourable, and builds in the upper angles of windows, and under the eaves of houses; sometimes under the arches of bridges, or against the face of rocks *. The Nest, &c. nest is formed of mud compactly worked and cemented by means of its bill, and is closed all around, except a small orifice, usually on the most sheltered side, and just of sufficient size to admit a passage to the inhabitants. It is well lined with a collection of straw, hay, and feathers. *MONTAGU* observes, that both the male and female are frequently

* Great numbers of this species annually breed about the lofty perpendicular cliffs of St Abb's Head, on the coast of Berwickshire; a great breeding resort also of the *Aleadæ*, and certain species of *Gulls*.

seen in the nest together, in which place the act of consumption is performed. The eggs are five or six in number, of a transparent or pinkish-white. The young are at first fed in the nest, but afterwards at the orifice, the parent birds adhering to the outside by the aid of their claws. When able to fly, they are still fed on the wing for a considerable time, like the Chimney Swallows. Two broods are commonly produced in the year, the first being able to fly in July, the second in August or September, some time previous to their migration. About the beginning of October, Martins congregate in vast numbers, frequently almost covering the roofs of houses, particularly in the villages upon the banks of the Thames. Towards the middle of the month they begin to depart, and continue to do so in flocks till about the 6th or 8th of November, after which time few are seen; and these, in all probability, are weak birds, that find themselves incapable of undertaking the journey, and perish under the first attack of the winter's severity. The form of this species is thicker than the Chimney Swallow; the wings also and tail are shorter in proportion to the size of the body. The flight of the Martin is very smooth and buoyant, but not so rapid, or attended with such sudden evolutions, as the preceding species. During the season of incubation, and when both birds are in the nest, it frequently utters its song, the notes of which, though guttural, are soft, and the cadences are pleasing. According to TEMNINCK, the migration of the Martin does not extend beyond the Tropics.

PLATE 42. Fig 2. Natural size.

General description.

Bill black. Head, back part of the neck, and upper part of the back, glossy bluish-black. Wings and greater coverts brownish-black. Tail the same, and forked. Under parts and rump snow-white. Tarsi and toes clothed with downy white feathers.

White varieties of this as well as the other species sometimes occur.

SAND-MARTIN.

HIRUNDO RIPARIA; Linn.

PLATE XLII. FIG. 3.

Hirundo riparia, Linn. Syst. 1. p. 344. 4.—*Fauna Suec.* No. 273.—*Gmel.* Syst. 1. p. 1019.—*Lath.* Ind. Ornith. 2. p. 575. 10.—*Raii* Syn. p. 71. A. 3.—*Will.* p. 156. t. 39.—*Briss.* 2. p. 506.—*Wils.* Amer. Ornith. v. 5. p. 46. pl. 38. f. 4.

L'Hirondelle de Rivage; *Buff.* Ois. v. 6. p. 632.—*Id.* Pl. Enl. 543. f. 2. the young.—*Temm.* Man. d'Ornith. v. 1. p. 429.

Uferschwalbe; *Bechst.* Naturg. Deut. v. 3. p. 922.—*Meyer,* Tasschenb. Deut. v. 1. p. 278.—*Frisch,* t. 18. f. 2. A.

Sand-Martin, Br. Zool. 1. No. 170.—*Arct. Zool.* 2. No. 332.—*Albin.* 2. t. 56. 6.—*Lewin's Br. Birds,* t. 125.—*Lath.* Syn. 4. p. 568. 10.—*Will.* (Ang.) p. 213. t. 39.—*Mont.* Ornith. Dict.—*Walc.* Syn. 2. t. 253.—*Pult.* Cat. Dorset. p. 13.—*Bewick's Br. Birds,* 1. p. 258.—*Low's Fau.* Orcad. p. 74.—*Shaw's Zool.* v. 10. p. 104. pl. 11.

PROVINCIAL.—*Sandy-Bank, Sand-Swallow.*

THIS bird is the earliest of the tribe in its visit to Britain, Periodical and is first seen about the end of March. visitant.

It is partially distributed through the country, and is only found, in any considerable number, in such districts as offer suitable situations for its peculiar mode of nidification, which is confined to precipitous sandy banks, whether as the boundary of rivers, or otherwise.—In these, by means of its bill and claws, it burrows horizontally, to a considerable depth, Nest, &c. and, at the end of the hole, makes a nest of hay, straw, feathers, &c. on which it deposits four or five white eggs. Mr Low states this species to be very common, and more numerous than the other, in the Orkney Islands.—It is mostly seen skimming the surface of lakes and rivers, where it meets with an abundant supply of gnats, and other aquatic flies. Food. Its manners are similar to those of the other species, with which it frequently associates, though I am not aware that it assembles in flocks, like them, previous to its periodical departure. It is the smallest of the genus that visits Great Britain.

PLATE 42. Fig. 3. Natural size.

General
descrip-
tion.

Bill black. The upper parts, cheeks, and pectoral band, dark hair-brown. Wings clove-brown, inclining to blackish-brown. Throat, belly, and upper tail-coverts, white. Tail brown, forked. Tarsi and toes naked, with the exception of a few small feathers placed at the insertion of the hind toe. The female is similar in plumage to the male bird.

The young have the upper parts of their plumage bordered with pale or wood-brown; and the tail-feathers margined with yellowish-white.

GENUS CYPSELUS, *ILLIG.* SWIFT.

GENERIC CHARACTERS.

Bill very short, depressed, and wide at the base, triangular; the gape extending beyond the posterior angle of the eye; upper mandible deflected at the point. Nostrils cleft longitudinally on each side of the ridge, open, with a prominent margin, beset with small feathers. Feet having the tarsi very short and thick; toes four, all directed forwards, entirely divided, of two phalanges each, strong, and armed with thick and hooked claws. Tail composed of ten feathers. Wings very long, the first quill being rather shorter than the second.

Dr LATHAM, in his *Index Ornithologicus* (under the head *Hirundo Apus*), first suggested the propriety of separating the Swifts from the Swallows. In this idea he is supported by ILLIGER, TEMMINCK, and other eminent naturalists, who have accordingly adopted the generic term *Cypselus* for these birds. In many respects they resemble the preceding genus, feeding and living much in the same manner. They construct their nests in the holes of buildings, or in the clefts of rocks, forming them of various soft materials, col-

lected upon the wing, cemented together by a viscid matter, secreted for that purpose, by appropriate glands. They never alight upon the ground; the shortness of their legs, compared with their great length of wing, preventing their rise from a flat surface.

COMMON SWIFT.

Cypselus murarius, Temm.

PLATE XLII. FIG. 4.

Cypselus murarius, Temm. Man. d'Ornith. v. 1. p. 434.
Hirundo Apus, Linn. Syst. 1. p. 344. 6.—*Gmel.* Syst. 1. p. 1020. sp. 6.—
Lath. Ind. Ornith. v. 1. p. 582. sp. 32.—*Fau.* Suec. No. 272.—*Raii* Syn.
 p. 72. A. 4.—*Will.* p. 156. t. 39.—*Briss.* 2. p. 512. 15.—*Id.* 8vo. 1. p. 301.
Micropus murarius, Meyer, Tasschenb. Deut. v. 1. p. 281.
Brachipus murarius, Id. Vög. Liv. und Esthl. 143.
Le Martinet noir ou Grand Martinet, Buff. Ois. v. 6. p. 643.—*Id.* Pl.
 Enl. 542. f. 2.—*Temm.* Man. d'Ornith. v. 1. p. 434.
Thurm-schwalbe, Bechst. Naturg. Deut. v. 3. p. 929.—*Frisch.* Vög. t. 17.
 f. 1.—*Meyer,* Vög. v. 1. Heft. 4.
Swift, Br. Zool. No. 171. t. 57.—*Aret.* Zool. 2. No. 334.—*Will.* (Ang.)
 p. 214.—*Albin.* 2. t. 55.—*Lewin's Br. Birds,* 3. t. 126.—*Lath.* Syn. 4.
 p. 584. 34.—*Pult.* Cat. Dorset. p. 13.—*Mont.* Ornith. Dict.—*Walc.* Syn.
 t. 254.—*Bewick's Br. Birds,* v. 1. p. 259.

PROVINCIAL.—Screech, Develing, Black Martin.

THIS is the only British species of its genus, and is with us a summer visitant *.

Periodical visitant.

The Swift is seldom seen in the northern parts of England before the end of May, or the beginning of June; in the south it arrives a week or two earlier. It leaves us again for warmer climates in August, a month or six weeks previous to the departure of the Swallows. In this country it haunts

* Since the publication of the first edition of this volume, a specimen of the Alpine Swift (*Cypselus alpinus*), was sent to me by WILLIAM SINCLAIR, Esq. of Belfast, which was killed within eight or ten miles of the south coast of Ireland. Mr SINCLAIR thinks it probable that the species annually resorts to that part of the island, but as such a fact has not been ascertained, I only thus casually mention it.

cathedrals, towers, churches, and other buildings not constantly inhabited, in the holes, and under the eaves of which it finds a safe retreat, and proper situation to build in.—The nest &c. nest is formed of straw and other suitable materials, which it collects with great dexterity in its flight.

These are cemented together, and the inside of the nest is plastered with a viscid substance, furnished by glands peculiar to certain birds of this genus. The eggs are usually two, but TEMMINCK says three or four, of a transparent pinkish-white. The form of the Swift is admirably adapted to its mode of life, the greater part of which is passed in floating through the air. Its head is broad and flat, the neck very short, and the wings longer in proportion to its size and weight, than those of any other bird. Except during the short periods of nightly repose, the Swift is constantly upon wing; in fine weather flying at a great height, and describing extensive circles with an easy sweeping motion; in a damper state of the air its flight is nearer to the ground; in both cases regulated by the situation of its insect prey, which is higher or lower as directed by the atmospheric changes. It has been remarked that these birds delight in sultry weather, with approaching thunder-storms, at such times flying in small parties, with peculiar violence, and as they pass near steeples, towers, or corners of buildings, uttering loud screams, which WHITE, in his Natural History of Selborne, supposes to be a sort of serenade to their respective families. This is fanciful and pretty; but I should rather be inclined to reason the opposite way, and to consider this action and cry as the consequences of irritability, excited by the highly electrical state of the atmosphere at such times *. The above mentioned scream is the only note this bird possesses. Like the Swallows, it is frequently seen skimming the surface of lakes and rivers in pursuit of its food, and, like them also, it both drinks and bathes upon

* See note in the account of the Green Woodpecker.

the wing. The shortness of the tarsi, and the great length of the wings, render the Swift unable to rise from an even surface; it is therefore (as if conscious of such inability) never seen to alight on the ground. It can, however, fix itself with ease against the perpendicular face of walls or rocks, by means of its strong toes and hooked claws, which are disposed in a different manner from those of the preceding genus.

It is found throughout the Old Continent, but has not been met with in America. According to TEMMINCK, it does not migrate beyond the Tropics.

PLATE 42. Fig. 4. Natural size.

Bill black. Throat smoke-grey. The rest of the plumage General greenish-black, with reflections; the feathers close in ^{description.} texture, and firmly pressed together. Tarsi covered with small feathers. Irides brown.

FAMILY III.—CAPRIMULGIDÆ.

THE members of this family (which forms the second *typical* division of the tribe) are birds of nocturnal or crepuscular habits, clothed with a plumage, both in texture and appearance, very similar to that of the Owls, with which raptorial group they are brought into close connection by means of the genus *Podargus*, where the bill acquires great strength and convexity, and the space around the eyes and base of the bill becomes furnished with radiating hairy feathers. In the typical genera the external or horny part of the bill (as in the *Hirundinidæ*) is very small and slender, the gape very large, and its margin beset at regular distances with long stiff bristles, moveable when requisite, and, by their converging power, of use in securing and detaining their prey. The legs are short and weak, but there is a full development of wings and tail, and consequently a correspond-

ing power of flight, and, as in the Swallows, their prey (consisting of Phalænæ and other insects) is taken entirely upon wing. In the aberrant forms the wings become much shorter and rounded, and the bill acquires greater size and strength, most displayed in the before mentioned genus *Podargus*. In some the tarsi also become elongated; and according to these differences of structure a corresponding variation is wrought in their economy. In Britain we only possess a single species of the typical genus *Caprimulgus*; the members of the other genera (*Egotheles*, *Podargus*, &c.), being natives of the warmer climates of Asia, Africa, and America.

GENUS CAPRIMULGUS, LINN. GOATSUCKER.

GENERIC CHARACTERS.

Bill very short, weak, curved at the tip, broad and depressed at the base; the upper mandible deflected at the point. Gape very large, and extending as far as, or beyond, the posterior angle of the eyes. The basal edge of the upper mandible bordered with strong moveable bristles directed forwards. Nostrils basal, tubular, or with a large prominent rim, clothed with very small feathers. Wings long, the first quill shorter than the second, which is the longest of all. Tail rounded or forked, of ten feathers. Feet having the tarsi short, toes three before and one behind, the anterior ones united as far as the first joint by a membrane; the claw of the middle toe broad, and serrated on the inner edge.

The members of this curious genus are nocturnal and crepuscular feeders, and have, not unaptly, been termed *Night Swallows*. Here, however, the approach to the *Strigidae* is not so conspicuous, as it is seen in the great curvature and horny mass of bill of the genus *Podargus*, belonging to this family; which also possesses to a certain extent the radiating

feathers that surround the eyes and base of the bill in the Owls. The eyes and ears are also large and prominent in the whole of this genus, and the texture of the feathers very soft and delicate. Their food consists of the Phalænæ and other winged nocturnal insects, which they take with extended mouth during their flight. They moult once in the year, and the males are generally to be distinguished from the other sex by white spots ornamenting some of the quills, and the tips of the outer tail-feathers.

Some of the exotic species are decorated by extraneous feathers, or other appendages, issuing from the wings, tail, or bill.

EUROPEAN GOATSUCKER.

CAPRIMULGUS EUROPAEUS, Linn.

PLATE XLII *.

Caprimulgus europaeus, Linn. Syst. 1. p. 346. 1.

Fau. Suec. No. 274.—*Gmel.* Syst. 1. p. 1027.—*Lath.* Ind. Ornith. v. 2. p. 584. 5.—*Raii* Syn. p. 26. A. 1.—*Will.* p. 70. t. 14.—*Briss.* 2. p. 470. 1. t. 44.

Caprimulgus punctatus, Meyer, Tasschenb. Deut. v. 1. p. 284.

L'Engouevent, Buff. Ois. v. 6. p. 512.—*Id. Pl. Enl.* 193.

L'Engouevent ordinaire, Temm. Man. d'Ornith. Tagschlafer.—*Bechst.* Naturg. Deut. v. 3. p. 940.—*Frisch*, t. 100.

Geitmelker, Sep. Nederl. Vög. v. 1. t. p. 39.

Nocturnal Goatsucker, Br. Zool. 2. No. 173. t. 59.

European Goatsucker, Arct. Zool. 2. p. 437. A.—*Will.* (Ang.) p. 107.—

Albin. 1. t 10.—*White's Hist. Selb.* p. 62. 94.—*Lath.* Syn. 4. p. 593. 5.—

Id. Supp. p. 194.—*Lewin's Br. Birds*, 3. t. 127.—*Mont. Ornith. Dict.*—

Id. Supp.—*Pult. Cat. Dorset.* p. 13.—*Walk.* Syn. 2. t. 255.—*Don. Br. Birds*, 3. t. 67.

Night Jar, *Bewick's Br. Birds*, v. 1. p. t. 262.

PROVINCIAL,—Dor-Hawk, Fern-Owl, Night-Hawk, Jar-Owl, Churn-Owl, Wheel-bird.

THE Goatsucker is a summer periodical visitant, arriving Periodical in Britain about the end of May, or beginning of June, and visitant. departing in September, or in the commencement of the ensuing month.

It is rather impartially distributed throughout the kingdom, and is found in woods or narrow wooded valleys, particularly in the immediate neighbourhood of meadows or dry tracts of pasture ground. It is also very frequently met with in our upland districts, in those extensive fern-beds that clothe the slopes of grassy eminences, from whence has arisen its provincial name of *Fern-Owl*. It is impatient of the glare of daylight, and remains at rest upon the ground or perched lengthwise upon the horizontal branch of a birch or other tree, till after sunset ; when it sallies forth in pursuit of its food, consisting of the *Melalonthæ*, and other coleopterous insects, and the larger species of *Phalaenæ*.

Food.

It flies with its capacious mouth fully extended, and as the bristles lining the edge of the upper mandible are capable of diverging or contracting, by means of muscles attached to their roots, they of course greatly assist in the capture and detention of its prey.—The flight of this bird, when thus hawking, is rapid, and attended with evolutions similar to those of the Swallow ; at other times, when disturbed, it is abrupt and wavering, though still buoyant. It breeds on the ground, making no nest, but generally selecting a dry spot, where the ferns have prevented the growth of the lower herbage.—It lays but two eggs, white, marbled with yellowish-brown and grey *. During the period of incubation, and after it has left its noonday retreat, the male utters a very peculiar noise, which has aptly been compared to that of a spinning-wheel ; this is produced when the bird is perched, with the head lowermost. It also utters a shrill cry during its flight.

Eggs.

In this species, the membrane that lines the inside of the mouth is very thin and transparent, particularly opposite to the posterior part of the eye, which organ is pretty clearly discernible through the membrane. As the mouth opens to

* To the nest, or rather *eggs*, of the Goatsucker, may be referred all the accounts, however plausibly narrated, of the *Cuckoo* incubating her own eggs, and rearing any offspring.

such great lateral extent, it has been suggested that the bird may possibly be capable of turning the eye in its socket, so far as to look through this almost transparent veil in a straight forward direction, when the mouth is extended in its nocturnal flights. I have consequently directed my attention to this point, but as yet without any satisfactory result.

I have not been able to discover any peculiar muscles attached to the eye or its coats, that can enable the bird to turn it in the direction suggested; and I may here observe also, that the size and prominence of this important organ gives it, in its fixed position, a sufficient field of vision for all the purposes of flight and capture of its prey.

The winter retreat of the Goatsucker is presumed to be in Africa and Asia, as the specimens from both countries correspond with our own. According to TEMMINCK, it is common in France and Germany, but rare in Holland.

PLATE 42*. A male bird of the natural size.

General plumage ash-grey, spotted and streaked with yellowish-brown. On the head, and down the middle of the back, run long black streaks. Throat having large white spots. Under parts yellowish-brown, with transverse blackish-brown bars. Outer webs of the quills scolloped with orange-brown; the three exterior feathers having a large white patch on the inner webs near their tips. Tail marked with zigzag lines or bars of black, grey, and yellowish-brown; the two outer feathers on each side tipped with white. Bill very short; colour blackish-brown. Gape very wide. Irides dark. Legs short, yellowish-brown. The whole of the plumage is very soft, and silky to the touch.

The female is without the white spots on the quill-feathers and the white upon the tips of the outer tail-feathers. In other respects she resembles the male bird.

FAMILY V.—HALCYONIDÆ *.

WE now arrive at the Halcyonidæ, which constitutes the fifth and last aberrant family of the tribe, and which meets the *Meropidae* at the other extremity of the circle, being closely connected with it by means of the genera *Galbula*, *Monasa*, &c., in which the bill acquires, in a great measure, the shape and proportions of that of the Bee-eaters. The typical form of this family exists in the genus *Alcedo*, as now restricted, and of which our common King's-fisher may be considered the representative. A great number of species formerly included in that genus by earlier systematists, have been separated from it under the genera *Halcyon* (of SWAINSON) and *Dacelo* (of LEACH); which exhibit a departure from the peculiar structure of the *true* King's-fisher, with regard to the bill and other parts, attended by a corresponding difference in their habits and economy. The Halcyonidæ prey upon animal matter, particularly fish and insects, which they take upon wing, seizing the latter in their flight, and the former by plunging down upon them as they rise to the surface of the water. Their feet are formed for grasping, but are incapable of aiding them in progressive motion, and their flight is rapid and direct. Their plumage, especially that of the typical group, frequently exhibits the richest and most vivid colours, with a metallic or varying lustre, as differently presented to the incidental rays of light. They are mostly natives of the warmer climates of the Old and New World, Europe boasting of but a single species of the genus *Alcedo*.

* We possess no British species of the family *Trogonidae*, the 4th in this arrangement.

GENUS ALCEDO, LINN. KING'S-FISHER.

GENERIC CHARACTERS.

Bill long, straight, quadrangular, higher than broad, thick and pointed ; with both mandibles gradually tapering to the tip of the bill. Tongue fleshy, short, and armed at the point. Nostrils basal and lateral, pierced obliquely, and nearly closed by a naked membrane. Feet having the tarsi short, with three toes before, the outer toe being joined to the middle one, as far as the *second* joint ; the inner one the same, as far as the *first* ; and with one posterior toe, large at its base. Wings, with the first and second quills nearly equal, but shorter than the third ; which last is the longest in each wing.

The different species which compose this genus, are, with only one exception, natives of the other quarters of the globe, and are generally remarkable for splendour of plumage. They are inhabitants of the banks of lakes and rivers, living upon fish and aquatic insects. They fly with great rapidity, and usually lead a solitary life. They breed in the clayey banks of streams, and for this purpose form deep holes, by the aid of their bill and feet. Their form is short and thick.

COMMON KING'S-FISHER.

ALCEDO ISPIDA, Linn.

PLATE XL. FIG. 1.

- Alcedo Ispida, *Linn.* Syst. 1. p. 179. 3.—*Gmel.* Syst. p. 448. sp. 3.—*Lath.* Ind. Ornith. v. 1. p. 252. sp. 20.—*Raii* Syn. p. 48. A. 1.—*Will.* p. 101. t. 24.—*Briss.* 4. p. 471. 1.
 Gracula Atthis, *Gmel.* Syst. 1. 398. sp. 8.—*Lath.* Ind. Ornith. v. 1. p. 192. sp. 10.
Ispida Senegalensis, *Briss.* 4. p. 485. 7. t. 39. f. 1.
 Le Martin Pecheur, *Buff.* Ois. v. 7. p. 164. t. 9.
 Le Baboucard, *Id.* v. 7. p. 193.—*Id.* Pl. Enl. 77.
 Martin Pecheur Alcyon, *Temm.* Man. d'Ornith. v. 1. p. 423.
 Gemeine Eis Vögel, *Bechst.* Naturg. Deut. v. 2. p. 1106.—*Meyer*, Tasschenb. Deut. v. 1. p. 134.—*Frisch*, t. 223.
 King's-Fisher, *Br. Zool.* 1. No. 88. t. 38.—*Arct. Zool.* 2. p. 280. A.—*Albin*, 1. t. 54.—*Will.* (Ang.) p. 146. t. 24.—*Lath.* Syn. 2. p. 626. 16.—*Id.* Sup. p. 115.—*Lewin's Br. Birds*, 2. t. 52.—*Mont.* Ornith. Dict.—*Id.* Sup.—*Bewick's Br. Birds*, v. 2. t. 19.—*Pult. Cat. Dorset.* p. 6.—*Walc.* Syn. 1. t. 52.—*Don*, Br. Birds, 4. t. 100.—*Shaw's Zool.* 8. p. 88.

THIS splendid little bird is indigenous in Britain, and, in point of locality, is rather generally, though sparingly, diffused. It inhabits the banks of clear rivers and brooks, preferring those that flow with an easy current, and whose beds are margined with willows, alders, or close bushes. It is usually seen perched upon a small bough overhanging the stream, from whence it darts upon the small fish and aquatic insects that form its food.

Food.

Sometimes it will hover suspended (in the manner of the Kestrel and some other Hawks) over the water, and precipitate itself upon its prey, when risen to the surface. Upon making a capture, it conveys the object to land, and, after beating it to death upon a stone, or on the ground, swallows it whole. The bones and other indigestible parts are afterwards ejected in small pellets, by the mouth.—Its flight is very rapid, and sustained by a quickly repeated motion of the wings, and is always in a straight and horizontal direction, near to the surface of the water. These birds breed in

the banks of the streams they haunt, either digging a hole themselves, or taking possession of that of a water-rat, which they afterwards enlarge to suit their convenience. The bearing of the hole is always diagonally upwards, and it pierces two or three feet into the bank.—The nest is composed of Nest, &c. the above-mentioned pellets of fish-bones, ejected into a small cavity at the farther end of this retreat, and upon which the eggs are laid, to the number of six or seven, of a transparent pinkish-white. MONTAGU remarks, that the hole in which they breed is not fouled by the castings of the old birds, but becomes so by the droppings of the brood, which, being of a watery nature, cannot be carried away by the parents, as is usual with most small birds. Instinct has therefore taught them to make the hole in a sloping direction, in order to carry away the offensive matter, which may frequently be seen issuing from the entrance of this passage to the nest.

The young, when nearly fledged, are very voracious, and often reveal their habitation by their continued cry.

Attempts have been sometimes made to rear the King's-fisher in a state of confinement, but generally without success; as it will not live without a full supply of fresh fish, which it is difficult to procure at all seasons. Worms have been tried as a substitute, but without answering the intended purpose. For an account of the poetic fictions, and stories of earlier times relating to the Haleyon, my readers are referred to PENNANT's account of this bird in his British Zoology.

This is the only species of an extensive genus that is found in Europe, throughout which it is generally dispersed; and it differs in no respect from the same bird in Asia and Africa, as I have had an opportunity of examining specimens from both Continents.

PLATE 40. Fig. 1. Natural size.

Bill blackish-brown, reddish at the base. Behind each eye General
is a patch of light orange-brown, succeeded by a white ^{descrip-}_{tion.}

one. From each corner of the under mandible proceeds a streak of verditer-blue, tinged with verdigris-green. Crown of the head deep olive-green, the feathers tipped with verdigris-green. From the nape of the neck to the tail is a list of verditer-blue feathers, tinged in some shades with verdigris-green. Wing coverts and quills deep greenish-blue, margined with pale greenish-blue, and tinged with verdigris-green. Chin and throat yellowish-white. Breast, belly, and vent, orange-brown, palest towards the under tail coverts. Tail greenish-blue; the shafts of the feathers black. Legs pale tiled-red.

TRIBE II. DENTIROSTRES, *CUVIER.*

The distinct emargination of one or both mandibles, near the tip of the bill, and which may be considered as analogous to the tooth or festoon of the typical *Raptores*, is the marked characteristic of the birds belonging to this division of the *Insessores*. This formation, though but in few instances so powerfully developed as to enable them to tear in pieces their prey, contributes essentially to the firmness and security with which they lay hold of it. In the *Laniadæ*, one of the typical families of the tribe, it is more distinctly prominent than in any of the others, and, as might be expected, we find the habits and food of the Shrikes more assimilated to those of the Raptorial order. In the Dentirostres, the bill is generally lengthened, so as to defend the face from the struggles of their prey, which is always taken by the aid of this member; or, where it is short and broad, the base is furnished with stiff projecting bristles, or having feathers that answer the same purpose of defence. The legs and feet are more fully developed than those of the *Fissirostral* tribe (with which, however, the necessary connexion is preserved by different members of the family of the *Todidaæ*),

but they are less perfectly constructed than the feet of the *Conirostres*; as may be seen in the frequent connection of the middle and outer toes. The five natural families of this tribe are arranged in the following tribes, viz. *Todidæ* (by some named *Muscicapidæ*), *Laniadæ*, *Merulidæ*, *Sylviadæ*, and *Ampelidæ*; each of which is again divisible into inferior circles or subfamilies, but all united together by one unbroken chain of affinities.* The food of the present tribe of birds is of various kinds; that of the *Todidæ* and *Laniadæ* consisting almost exclusively of insects and animal matter; whilst in the *Merulidæ* and *Sylviadæ*, the smaller fruits frequently form a considerable part of it; and, in the *Ampelidæ*, it is still more confined to a vegetable nature.

FAMILY I. TODIDÆ.

As being closely allied to the preceding or Fissirostral tribe of the *Insessores*, the circle of the Dentirostres commences with the aberrant family of the *Todidæ* of SWAINSON, which, from a strict analysis of the forms it contains, embraces not only the genus *Todus* of the Authors, but also the Fly-Catchers (*Muscicapidæ*). Its members are distinguished by a bill, with the tip emarginated, broad, and depressed at the base, and beset with projecting bristles; legs short and weak; feet calculated for perching, but not for gressorial movements. Their food consists of insects, which they generally capture by irregular flights or irruptions upon them when passing the stations, where the birds sit pa-

* As the nature of this work precludes the possibility of entering fully into the various affinities in the feathered race, or even to point out the analogies running through all the major and minor divisions, I must refer my readers to the works of those who have written more expressly upon this point; particularly to the 2d vol. of the "Northern Zoology," where Mr SWAINSON has entered deeply into the subject, and traced it with the hand of a master.

tiently watching for their appearance. To the *Laniadæ* the present family is nearly related, by the apparent affinity between the Flycatchers, belonging to the genera *Fluvicola*, and the Tyrants (*Tyrannina*), a subfamily belonging to the preceding tribe. A near connexion also exists with the *Sylviadæ*, in which the genus *Setophaga* and some others make a close approach, in the increasing breadth of the base of the bill, in the bearded gape, and in habits, to some of the true Flycatchers. Of the various forms contained in this family, we only possess representatives of a single group, viz. the *Muscicapa* of Authors.

GENUS MUSCICAPA, LINN. FLYCATCHER.

GENERIC CHARACTERS.

Bill rather short, subtriangular, depressed at the base, strong, and compressed towards the tip, which is deflected, and with both mandibles emarginated. Base of the bill beset with long stiff bristles. Nostrils basal, oval, and lateral, partly concealed by the feathers at the base of the bill. Feet having the tarsus as long as, or rather longer than, the middle toe; toes three before and one behind, the side ones of equal length, the outer one joined at its base to the middle toe. Wings having the first quill very short, the second shorter than the third and fourth, which are the longest in each wing.

The members of this genus are confined to the Old World, and are found in all the temperate and warm climates. The few species, however, which visit Europe are all summer visitors, or (as sometimes called) *polar migrants*, and are only resident during the period necessary for the continuation of their kind.

The food of the genus, according to their appellation, con-

sists of insects, which they take upon wing with great dexterity, not, like the Swallow tribe, by meeting with them during their flight, but by sallies from their perched situation at the various flies that pass them. The male birds of some of the species are subject to a double moult, or rather to a partial change in the colour of the plumage, on the approach of spring, or the pairing season. During the rest of the year, they resemble the females.

SPOTTED FLYCATCHER.

MUSCICAPA GRISOLA, Linn.

PLATE XLIII*. FIG. 1.

Muscicapa grisola, Linn. Syst. I. p. 328. 20.—*Gmel.* Syst. I. p. 949.—*Lath.* Ind. Ornith. 2. p. 467.—*Briss.* 2. p. 357. l. t. 35. f. 3.—*Raii* Syn. p. 81. 7.—*Will.* p. 153. 171.

Le Gobe-mouche, proprement dit, *Buff.* Ois. v. 4. p. 517. t. 25.—*Id.* Pl. Enl. 565. f. 1.

Gobe-mouche gris, *Tem.* Man. d'Ornith. v. 1. p. 152.

Geeleckter Flugenfänger, *Bechst.* Naturg. Deut. v. 3. p. 421.—*Meyer,* Taschenb. Deut. v. 1. p. 211.—*Frisch*, t. 22. f. 2. 6.

Spotted Flycatcher, Br. Zool. I. p. 350. No. 134.—*Lewin's Br. Birds*, 3. t. 87.—*Lath.* Syn. 3. p. 323. l.—*Mont.* Ornith. Dict.—*Bewick's Br. Birds*, v. 1. p. 196.—*Id.* Supp. p. 30.

PROVINCIAL—Beam-Bird, Rafter, Bee-Bird.

THIS is one of our latest summer visitants, seldom making its appearance before the latter part of May, or until the woods are in complete foliage, when the particular insects also that compose its food are in full vigour and maturity. It is generally dispersed throughout the island, particularly in all wooded districts. It frequents our gardens and orchards during the season of incubation, and frequently builds upon the branches of fruit-trees that are nailed against walls, and sometimes in the forks and decayed holes of standard trees.

Its nest, which is formed of moss and small twigs, lined Nest, &c. with hair and feathers, is often placed also upon the ends of the beams or rafters in garden-houses, and other out-build-

ings; and I have frequently met with it situated upon the ledge of a rock in our northern woody dells. It lays four or five eggs, of a greyish-white, spotted with pale orange-coloured brown. After its young have quitted the nest, it conducts them to some neighbouring wood or plantation, where they are very diligently attended and fed.

Food.

It seems to feed entirely on insects, chiefly of the Dipteronous order, which are taken on the wing, by repeated sorties upon them, in passing, from its selected station, which is usually the top of a decayed branch, and to which it returns after each of these aerial attacks. It has been stated by PENNANT, and other authors, to be very partial to cherries, but this I have not been able to verify; and I am inclined to believe, that the Greater Pettychaps (*Sylvia hortensis*), a keen devourer of all the smaller fruits, has, in most instances, been mistaken for the present bird. The note of the Flycatcher is a monotonous weak chirp, and is not often heard till after the production of its young.

It seldom leaves the northern parts of Britain on its autumnal journey before the middle of October, and long after the departure of most of the Sylviadæ. Its summer or polar migration extends as far as Sweden and Norway. In Scotland it is of rare occurrence.

General description.

PLATE 43*. Fig. 1. Natural size. Form typical.

Upper parts of the body light hair-brown; the crown of the head spotted darker. Throat and middle of the belly white. Sides of the neck, breast, and flanks, streaked with hair-brown. Bill and legs dark hair-brown.

The young, in their nestling (or first) plumage, have the feathers tipped with a spot of yellowish-white, giving them a pretty mottled appearance.

PIED FLYCATCHER.

MUSCICAPA LUCTUOSA, Temm.

PLATE XLIII*. FIGS. 2, 3.

Muscicapa luctuosa, Temm. Man. d'Ornith. I. p. 155.

Gobe Mouche becfrisé, Temm. id.

Muscicapa atricapilla, Gmel. Syst. I. p. 935. sp. 9.—*Lath.* Ind. Ornith. v. I. p. 467. sp. 2.*Rubetra Anglicana*, Briss. Orn. v. 3. p. 436. sp. 27.*Schwartzrückiger Flugenfänger*, Bechst. Naturg. Deut. p. 431.—Meyer, Tasschenb. Deut. p. 232.—Frisch. t. 24. f. 2.*Pied Flycatcher*, Br. Zool. I. 351. t. 135.—Arct. Zool. 2. p. 391.—*Lewin's Br. Birds*, 3. t. 38.—*Lath. Syn.* 3. p. 324. 2.—*Mont. Ornith. Dict.* Id. Suppl.—*Bewick's Br. Birds*, 1. p. t. 195.Syn. of Adult
Male in sum-
mer.*Motacilla ficedula*, Gmel. Syst. I. p. 936. sp. 10.*Sylvia ficedula*, Lath. Ind. Ornith. 2. p. 517. sp. 28.*Muscicapa muscipeta*, Bechst. Naturg. Deut. 3. p. 435.*Le Beccighe*, Buff. Ois. v. 5. p. 187.—Id. Pl. Enl. 668.*Schwartzgrauer Flugenfänger*, Meyer, Tasschenb. Deut. v. I. p. 213.*Epicurean Warbler*, Arct. Zool. v. 2. p. 419.—*Lath. Syn.* v. 4. p. 432.Male, Female,
and Young in
winter.

THIS species has been treated as indigenous in some parts of our island by many of the British ornithologists, but I have not hitherto been able to determine whether this is a well-grounded assertion; and I was led to doubt, from my own experience being in direct opposition to it. Within the last two or three years, several specimens of this bird have fallen under my inspection, all of which were killed in the spring or summer.† I have inquired also in those districts

Occasional
visitant.

† Two specimens of the present species were sent to me for inspection by the Rev. T. GISBORNE, College, Durham, which were killed at Yoxall Lodge, in Staffordshire, on 20th August 1827. They were evidently young birds of the year, and precisely alike in colour and markings. Head and upper parts of the body grey, tinged with brown. Greater wing-coverts tipped with yellowish-white. Quills, commencing at the fourth, with a white spot at the base of the outer web. The two nearest the body having the whole of the web deeply marginated with white. Chin and throat yellowish-white. Breast and under parts yellowish-white, tinged with grey. Tail brownish-black; the three outer feathers on each side having their exterior webs marginated with white. Bill and legs black.

The following memorandum accompanied them: "Two supposed Fly-

where it has been most frequently met with, and consequently where, if indigenous, it was most likely to have been found during the winter; but in no quarter has any trace of its permanent residence been discovered, and my inquiries have been answered, by stating it as a bird that evidently arrives in the spring, and disappears in the autumn.

Its mode of life, and the species of food upon which it subsists, also militate against the idea of its wintering in this island; for, living entirely on winged insects, it would be impossible for it to procure an adequate supply of food during the severity of the winter season. I should even be inclined to consider the few individuals met with in England during the *summer*, as birds that have been driven rather out of the regular track of their polar migration; and the following fact goes far towards confirming this supposition. In May 1822, after a very severe storm of wind and rain from the south-east, several of these birds made their appearance in Northumberland, and I procured specimens of both sexes, the males being in different states of progress towards the summer's plumage. As the weather continued cold for some days subsequent to their appearance, they were obliged to resort to dunghills, and other warm situations, for a supply of their natural food. After remaining for about a fortnight to recruit their strength (for at first they exhibited great weakness), they all disappeared; nor could I ascertain that a single pair remained in that neighbourhood during the season of incubation.

Their manners, flight, and method of catching their prey, were similar to the preceding species; and they were generally mute.

The West Riding of Yorkshire, and the neighbourhood of Penrith in Cumberland, appear to be the districts in

catchers, shot whilst actively employed in coming down from the tops of oak trees to catch the flies, which the swallows also were busy in taking." Length $5\frac{1}{8}$ inches, breadth $7\frac{1}{2}$ inches; weight of the one 3 drs. 1 scr. 5 grs., of the other, 3 drs. 1 scr. 1 gr.

which the Pied Flycatcher is oftener met with than in any other part of the island. It breeds there in the holes of decayed trees, forming a nest of leaves, bark, and hay, lined with hair and feathers. The eggs are four or five in number, of a pale greenish-blue colour.

I have also seen specimens from Dorsetshire.

According to TEMMINCK, it is very abundant in the southern provinces of Europe, and along the coasts of the Mediterranean; is found in the central parts of France and Germany; and is also common in Italy.

PLATE 43*. Fig. 2. Natural size. Form typical. A male bird, in the summer plumage.

Head and upper parts of the body black, forehead and under parts pure white. Wings brownish-black, the middle and greater coverts white. In the old males, the feathers of the tail are entirely black; in younger birds the outer feathers have more or less white on them.

Fig. 3. In the female the forehead is not of so pure a white as in the other sex. The upper parts are of a blackish-grey; which is also the colour of the male in winter. Under parts white. Legs black.

FAMILY II.—LANIADÆ.

This family, forming one of the typical divisions of the tribe, contains all the forms that were included by LINNÆUS in his extensive genus *Lanius*, as well as a multitude of others, arranged in various genera, or discovered since that period in different parts of the world. The emargination of the bill is strongly marked throughout the whole series, in one group assuming the form of a distinct tooth. In some members the bill is strong, arched, and compressed; in others, it is nearly strait, the tip alone being bent down; and again, in

the aberrant forms, it is found of great breadth, and much depressed at the base, approaching nearly in shape to that of the Flycatchers of the preceding family. The Laniadæ are all insectivorous, and some few belonging to the strong-billed groups are partly carnivorous, destroying young and weak birds, and the smaller mammalia. According to MR SWAINSON, who has analyzed the group of the Laniadæ with the acumen and indefatigable perseverance that so eminently distinguish him, the five following subfamilies compose its circle, viz. *Tyrannina*, *Laniana*, *Thamnophilina*, *Edoliana*, and *Cellepyrina*, of which the typical genera are, *Tyrannus* (BRISSON), *Lanius* (LINN.), *Thamnophilus* (VIEIL.), *Ocypterus* (Cuv.), and *Cellepyris* (Cuv.); all of which, it is almost unnecessary to add, are intimately connected among themselves by strong and well defined characteristics. Of the first subfamily (*Tyrannina*) we have not any examples, this form being restricted to America; of the second (*Laniana*) we have three species, belonging to the genus *Lanius*; the next three are also unknown in Europe.

SUBFAMILY LANIANA.

In addition to the true Shrikes, or *Butcher Birds*, composing the genus *Lanius* as now restricted, and which are the typical representatives of the present tribe, this subfamily contains various other genera, nearly allied to each other, but departing in some points, either of organization or habits, from the type. Such are the genus *Malaconotos*, belonging to the African continent; that of *Falcunculus*, discovered in New Holland; and various others, which lead the way to, and connect the present with, other tribes and families of the *Insessores*. Speaking generally of the genus now before us, the bill may be stated as strong, and compressed; having the upper mandible more or less arched; and being armed with a prominent emargination or tooth. The legs of

mean length and strength, and better adapted for perching than for walking. Wings rather short; with the tail somewhat elongated, and commonly graduated. These birds are insectivorous, and some of them also carnivorous, but their prey is almost entirely captured by the bill. In Britain we only possess examples of the typical genus *Lanius*.

GENUS LANIUS, LINN. SHRIKE.

GENERIC CHARACTERS.

Bill rather thick, straight at the base, compressed, upper mandible considerably deflected at the point, and strongly emarginated or toothed. Base of the bill beset with hairy feathers directed forwards. Nostrils basal, lateral, and egg-shaped, partly closed by an arched membrane. Feet with three toes before, and one behind; the outer toe united at its base to the middle one. Tarsus longer than the middle toe. Claws falcate and sharp. Wings having the first quill short; the second less than the third and fourth, which are the longest in each wing.

The food of this genus principally consists of insects, sometimes of smaller birds and animals, which they tear in pieces with their bill, having first transfixed the object upon a thorn. Their mode of flight is irregular, and the tail is kept in constant agitation, as is the case with many birds belonging to this tribe. Some of the species are subject to a double moult, or rather to a change of colour in certain parts of the plumage twice in the year; in the rest it is ordinary and single.

GREAT CINEREOUS SHRIKE.

Lanius excubitor, Linn.

† PLATE XLIII. FIG. I.

Lanius excubitor, Linn. Syst. 1. p. 135. 11.—Fauna Suec. No. 80.—*Gmel.* Syst. 1. p. 300. 11.—*Lath.* Ind. Ornith. v. 1. p. 67. sp. 6.
Lanius, seu Collurio cinereus major, Raai Syn. p. 18. A. 3.—*Will.* p. 53. t. 10.—*Briss.* 2. p. 141. 1.
 Pie Grieche, *Buff.* Ois. v. 1. p. 296. t. 20.—*Id.* Pl. Enl. 445.—*Temm.* Man. d'Ornith. v. 1. p. 142.
 Grauer Wurger, *Meyer*, Tasschenb. Deut. v. 1. p. 87.—*Frisch.* t. 59.
 Blaaewe Klauwier, *Sepp.* Nederl. Vög. t. p. 121.
 Great Cinereous Shrike, Br. Zool. No. 71. t. 33.—Arct. Zool. 2. No. 127.—*Lewin's* Br. Birds, 1. t. 30.—*Lath.* Syn. 1. p. 160. 4.—*Mont.* Ornith. Dict.—*Pult.* Cat. Dorset. p. 4.—*Bewick's* Br. Birds, 1. p. 58.—*Dou.* Br. Birds, 4. t. 87.

PROVINCIAL.—Mountain Magpie, Mattiges, Wireangel, Murdering Pie.

Occasional
visitant.

THIS species can only be considered as an occasional visitant in England, where a few are usually observed in the course of their autumnal migration towards the equator, and are probably driven upon our eastern shore by adverse winds.

By most of the British ornithologists, it has been mentioned as arriving in spring and departing in autumn, which would imply that it breeds in this country, and is a regular periodical visitant. From this view of its habits I must be permitted to dissent, all the specimens that have come under my observation having been killed in the months of November, December, and January; nor have I ever seen or heard of an individual during the summer months. It is a solitary bird, being most frequently found single; though I have more than once met with a male and female together.

Food.

It feeds upon insects, as well as small birds, and the smallest class of animals, which it destroys by strangulation. Af-

† The Plate that should have been numbered thus, has been by mistake numbered 27.

ter having killed its prey, it transfixes it upon a thorn, and then tears it in pieces with its bill. This singular process is used with all its food. I had the gratification of witnessing this operation of the Shrike upon a Hedge Accentor (*Accentor modularis*), which it had just killed ; and the skin of which, still attached to the thorn, is now in my possession. In this instance, after killing the bird, it hovered, with the prey in its bill, for a short time over the hedge, apparently occupied in selecting a thorn fit for its purpose. Upon disturbing it, and advancing to the spot, I found the Accentor firmly fixed by the tendons of the wing at the selected twig. I have met with the remains of a mouse in the stomach of a Shrike; and MONTAGU mentions one in which he found a Shrew (*Sorex arenarius*). When confined in a cage, this bird still evinces the same propensity for fixing its food, and, if a sharp-pointed stick or thorn is not left for that purpose, it will invariably fasten it to the wires before commencing its repast. The flight of the Shrike is interrupted, being performed by jerks, and, when perched, the tail is kept in constant motion. Its voice is capable of variation, and it possesses a power of imitating the notes of many of the smaller Passeres ; in which respect it shews an approach to the *Mocking Thrushes* of the family *Merulidæ*. Wooded and enclosed situations are its favourite haunts.

It builds in trees and bushes, laying six or seven white Nest, &c. eggs, spotted with yellowish-brown. It is extremely courageous, attacking birds much its superior in size ; and will not allow a Hawk, Crow, or Magpie, to approach its haunts with impunity. Its legs and talons are slender and weak, and are but little used in securing and tearing up its prey, which are effected by the bill, being thick, and furnished with very powerful muscles ; and in this mode of capturing its food it strikingly differs from the rapacious order.

PLATE 43. Fig. 1. Natural size.

General description.

Bill black, strong, and much hooked at the tip ; the base covered with projecting bristles, that conceal the orifice of the nostrils. Irides blackish-brown. From the base of the upper mandible, a black streak runs past the eye, reaching half-down the neck. Upper parts pearl-grey, passing into pale ash-grey, upon the scapulars, rump, and upper tail-coverts. Wing-coverts black. Base of the primary quills white ; the rest black with white tips, under parts greyish-white. Tail wedge-shaped, of twelve feathers ; the two middle ones black, the two next tipped with white ; on the rest the black diminishes to the outermost feather, which is generally white. Feet and claws black.

The female differs only from the male bird in having the under parts of a deeper shade of greyish-white, marked with numerous transverse dusky lines.

RED-BACKED SHRIKE.

Lanius Collurio, Linn.

PLATE XLIII. FIG. 2., AND PLATE XLIII. FIG. 2. 3.

- Lanius Collurio, Linn.* Syst. 1. p. 136. 12.—*Gmel.* Syst. p. 200.—*Lath.* Ind. Ornith. v. 1. p. 69. 11.—*Briss.* v. 2. p. 151. sp. 4.
Lanius minor rufus, Raii Syn. p. 18. A. 4.—*Will.* p. 54.
Merulæ congener alia, Raii Syn. p. 67. 13.
Lanius spini Torquens, Bechst. Naturg. Deut. v. 2. p. 1335.
La Pie grise Ecorcheur, Buff. Ois. v. 1. p. 304. t. 21.—*Id. Pl. Enl.* 31. fig. 2. male, and fig. 1. female, under the title of *Pie Grieche rousse femelle*.—*Temm.* Man. d'Ornith. v. 1. p. 147.—*Le Vail.* Ois. d'Afriq. v. 2. pl. 64. f. 1. and. 2.
Rothrückiger Vurger, Meyer, Tasschenb. Deut. v. 1. p. 90.
Red-backed Shrike, Br. Zool. 1. No. 72.—*Arct. Zool.* 2. No. 131.—*Lewin's Br. Birds,* 1. t. 30.—*Lath.* Syn. 1. p. 167. 25.—*Id. Supp.* p. 52. *Mont. Ornith. Dict.*—*Id. Supp.*—*Pult. Cat. Dorset.* p. 4.—*Bewick's Br. Birds,* 1. p. 60.—*Shaw's Zool.* v. 7. p. 315.

Periodical visitant.

THE Red-backed Shrike is a regular periodical visitant in Britain, arriving in the spring, and commencing its equato-

rial migration in September or October, as soon as the young birds have acquired sufficient strength to undertake the journey. During its residence with us, it is but partially distributed, being confined principally to the southern and midland counties.

It is common on the extensive Downs of Sussex, and the adjoining line of coast, particularly upon those which abound with furze and thorn-bushes. It is also well known in Wiltshire and Gloucestershire, and I have seen it in different parts of Wales. It is occasionally met with in Cumberland, and the western parts of Yorkshire, where it has received the name of *Flusher*, and a few instances have occurred of its appearance as far north as the river Tyne.

Its habits are similar to the preceding species, and it pursues the same method with respect to its prey, which is chiefly confined to insects, particularly those of the coleopterous order. It forms a nest of moss, intermixed with wool and dry grass, lined with hair, in furze or thorn bushes; laying five or six eggs, of a pinkish-white, with small spots of wood-brown, disposed like zones, chiefly at the larger end. The young birds, when nearly fledged, soon give notice of the place of their concealment, by becoming very clamorous upon any approach to the nest. The notes of this species are varied, and its song is pleasing.

CAPTAIN MITFORD (whom I have before mentioned in this work) had an opportunity of observing the manners of these birds during the breeding-season, in the vicinity of Hastings, in Sussex, where they abound; and assures me that he never observed any particular hostility displayed by them towards the neighbouring smaller birds; and that he has found the nest of different species (*Sylvia*, &c.) within a very short distance of that of one of these Shrikes, which allowed them to bring up their young without molestation. It may be reared in confinement without difficulty, soon becoming tame. MONTAGU mentions having kept several, that shewed as much docility as Goldfinches. They were fed with flies and other

insects, and, in deficiency of such food, with raw-flesh, which they always endeavoured to fasten to the wires or other parts of the cage, previous to tearing it in pieces.

This bird is very generally dispersed throughout Europe, and, according to LE VAILLANT, is common in Africa, where it winters.

PLATE 43. Fig. 2. Male bird, of the natural size.

General description.
Male.

Bill black. Irides chestnut-brown. From the forehead a black streak runs past the eyes, reaching half-down the sides of the neck. Crown of the head and nape of the neck ash-grey, in some instances tinged with yellowish-grey. Throat and vent white. Breast, belly, and flanks rose-red. Back and wing-coverts reddish-brown. Quills blackish-brown, the edges of the outer webs being paler. Tail slightly wedge-shaped, the middle feathers black, the rest with more or less white at the base, and being tipped with white. Shafts black. Legs and feet black.

PLATE 43. Fig 2.1. Female, natural size.

Female.

Head and all the upper parts of the plumage chestnut-brown. Nape of the neck tinged with ash-grey. Throat and under parts greyish-white. The cheeks, breast, and flanks barred transversely with narrow semicircular blackish-brown lines. Outer webs of the two exterior tail-feathers margined with white. Base of the under mandible yellowish-white. Legs and toes blackish-brown.

WOODCHAT.

LANIUS RUFUS.

PLATE C. FIG. 1.

Lanius rufus, Briss. Orn. 2. 147. sp. 3.*Lanius rutilus*, Lath. Ind. Orn. 1. 70. sp. 12.*Lanius pomeranus*, Gmel. Syst. 1. 302. 33.*Lanius minor cinerascens*, Raii Syn. 19. A. 6.—Will. 54.

Le Pie grise rousse, Buff. Ois. 1. 301.—Id. Pl. Enl. 9. f. 1.—Temm. Man. d'Orn. 1. 146.—Lesson's Man. d'Orn. 1. 126.

Rothhöpfchen vurger, Bechst. Tasschenb. Deut. 101.—Meyer, 89.

Woodchat, Br. Zool. 1. 217. No. 73.—Albin, 2. t. 16.—Lath. Syn. 169. 17.

—Bewick's Br. Birds, ed. 1826. p. 75; but the figure seems doubtful, and more like the female or young of *Lanius Collurio*.

At the time of the publication of the First Series of the Illustrations, and the accompanying volume of letter-press, I had not been able to find any well authenticated instance of the capture of this species in Britain, and accordingly refrained from giving either a figure or description of the bird, although it had been considered as British, in all our ornithological works and compilations on Natural History since the time of WILLOUGHBY, who certainly refers to this species under the title of "another sort of *Butcher Bird*," but without stating from whence the described specimen was obtained. I have, however, now ascertained that it has occasionally been met with in England. MR LEADBETTER, the animal preserver (so well known to scientific ornithologists for his valuable collection of rare birds), assures me that he once had a fresh specimen brought to him, that had been killed in Yorkshire; and the Rev. R. HAMOND of Swaffham informs me of his having seen a Woodchat in a hedge, which bird he followed for a considerable distance, that, by repeated observation, he might assure himself of not being in error as to the species. BEWICK, in a late edition of his British Birds (1826), gives the figure of a Shrike, killed in the county of Durham, which he supposes to be the *Woodchat*. But his description of it

Occasional
Visitant.

is not so fully detailed as satisfactorily to identify the species, and the figure bears a greater resemblance to the female or young of *Lanius Collurio*, than to any state of the adult Woodchat; for the female of this species, like the male, possesses the distinguishing patch of white upon the scapulary feathers; and the markings and disposition of the colours of her plumage are nearly the same as in the male, only possessing less intensity and purity of tint. The bird he has figured may, I allow, have been the *young* of the species in question, as TEMMINCK remarks that they are very like the female of the Red-backed Shrike (*Lanius Collurio*), and are chiefly to be distinguished by the different proportions of the wings and tail.

The habits of the Woodchat are similar to those of the preceding species, and it pursues the same method of transfixing its prey, when caught, upon thorns, &c.

Food. Its food consists of the larger insects, and occasionally of young or weak small birds and mammalia.

It is not uncommon in parts of France, and is also found in Switzerland, Italy, and Germany. It is very plentiful in Northern Africa, from whence I have obtained specimens.

Nest, &c. It is said to build its nest in shrubby underwood, suspending it between the forks of branches in the manner of the Orioles; and the eggs are often six in number, of a greenish-white, varied with blotches of grey.

PLATE C. Fig. 1. Represents the male bird in the adult plumage. The form is typical; the second quill-feather slightly exceeding the fifth. Bill strong, convex above, the tooth or emargination of the upper mandible prominent, and distinctly marked. Above each nostril is a patch of white. Frontal band and region of the eyes and auriculars, brownish-black. Crown, occiput, and back part of the neck, reddish-orange. Mantle black. Scapulars white, forming a large and distinct patch. Wing-coverts and secondaries brownish-black; the lat-

General description.

Male Bird.

ter being finely margined with white. Greater quills having their bases white. Lower part of the back deep grey. Rump and upper tail-coverts white. Chin, throat, and under plumage, white, slightly tinged with yellow. Tail graduated; the outer feather white, with a large black square bar upon its inner web; the next feather having its basal part and tip white, and the remaining portion black; the other feathers being black, shewing indistinct bars of a deeper shade. Legs having the tarsi seven-eighths of an inch long; claws sharp, curved, and channelled. Total length of bird exceeding seven inches.

The female has the orange of the head and hind part of Female. the neck less pure in tint; and slightly rayed with lines of a deeper shade. The dark parts of her plumage are also of a browner tinge, and the white upon the scapulars rather sullied. The lower parts are also rayed with lines of pale brown.

FAMILY III. MERULIDÆ.

The connection between the Laniadæ and the Merulidæ, the second *typical* family of the Dentirostres, is reciprocally effected by various forms belonging to the subdivisions of each, which, mutually losing some peculiar characteristics of the typical representatives of their own family, assume in a greater or less degree those belonging to the other. Thus the Short-legged Thrushes (forming SWAINSON's subfamily *Brachypodina*) become nearly allied to the subfamily Laniana, by the intervention of the genus *Trichophorus*; and also the Ant Thrushes of the subfamily *Myiotherina* to certain species of the smaller *Thamnophilii*, or Bush-Shrikes of America.

Instead of the strong, short, dentated bill, that characterizes the typical Lanii, the true Thrushes have it longer and

more slender, with the notch less prominent or tooth-like; but sufficiently developed to assist them in taking firm hold of their food, which is not restricted to insects, but extends to worms and other soft animal substances, as well as the smaller fruits and berries. In the structure of their limbs and feet they shew a decided superiority over the Laniadæ, these members being more muscular, and so formed as to be equally well adapted for moving upon the ground or perching on trees. According to Mr SWAINSON, whose views in relation to this family agree with my own, the circle of the Merulidæ is formed of the five following groups or subfamilies, viz. 1st, *Brachypodina*, or Short-legged Thrushes, of which *Brachypus dispar* (SWAINS.) may be taken as a typical example; 2dly, *Merulina*, containing the true Thrushes (genus *Merula* of RAY), the Mocking Thrush (*genus Orpheus* of SWAINSON), Rock Thrushes genus *Petrocincla* of VIGORS), &c.; 3dly, *Myotherina*, which includes the genera *Myothera*, *Pitta*, *Myophonus*, *Cinclus*, &c.; 4thly, *Oriolana*, including genus *Oriolus*, as now restricted, *Mimeta*, *Sericulus*, &c.; and, 5thly, *Crateropodina*, or Strong-legged Thrushes, embracing many forms, arranged in various orders and genera by the earlier systematists, and of which the genus *Crateropus* of SWAINSON is the type.

SUBFAMILY MERULINA.

As we have no birds belonging to the first and aberrant subfamily *Brachyopodina*, I pass on to that of Merulina, one of the typical groups of the family, and composed of RAY's genus *Merula* (now restricted to the true Thrushes); *Petrocincla* (a genus instituted by VIGORS for the reception of certain species that frequent rocky situations); *Orpheus* (adopted by SWAINSON as a generic appellation for the Mocking Thrushes of America), and other nearly allied genera. In this subfamily, the bill is tolerably strong, rather

elongated, slightly arched and emarginated, rendering it efficient for the capture and secure detention of their different kinds of food. Their legs are muscular, and their feet, particularly those of genus *Merula*, adapted both for moving on the ground and perching. The greater part of the species are remarkable for the sweetness and versatility of their vocal powers, well exemplified in our indigenous bird the Thrustle or Mavis, and in the far-famed Mocking-Bird of America (the type of the genus *Orpheus*). The whole of the British members of this group belong to the true Thrushes (genus *Merula* of RAY).

GENUS MERULA, RAY. THRUSH.

GENERIC CHARACTERS.

Bill nearly as long as the head ; strait at the base ; slightly bending towards the point, which is rather compressed ; the upper mandible emarginated. Gape furnished with a few bristles. Nostrils basal, lateral and oval, partly covered by a naked membrane. Legs of mean length, muscular. Toes, three before and one behind ; the outer toe joined at its base to the middle one, which is shorter than the tarsus. Claws slightly arcuate ; that of the hind toe the largest. Of the wings, the first quill is short, and the third and fourth are the longest.

This genus being now very properly restricted to the true Thrushes (of which the Blackbird may be considered the type), I make no apology for adopting the generic appellation bestowed on that bird and its congeners by our illustrious countryman RAY, in preference to that of *Turdus*, afterwards given by LINNÆUS ; and under which designation a vast number of forms, belonging to other genera, and even families, have since been added by succeeding writers, thus rendering it a confused assemblage, only calculated to mis-

lead the student who seeks to follow the natural arrangement, or that based upon affinity. It is still a numerous genus, and some of the various species that it includes are found in every quarter of the globe.

Many of the European species are migratory, and assemble during the winter in large flocks. Their food consists of insects and worms, together with different kinds of berries and fruits. Their moult appears to be simple.

MISSEL-THRUSH.

MERULA VISCIVORA.

PLATE XLIV. FIG. 1.

Turdus viscivorus, Linn. Syst. 1. p. 291.—*Gmel.* Syst. 1. p. 806.—*Lath.* Ind. Ornith. 1. 326. 1.—*Raii* Syn. p. 64. A. 1.—*Will.* p. 137. t. 136.

Turdus major, Briss. 2. p. 200. 1.

La Draine, Buff. Ois. v. 3. p. 295. t. 19. f. 1.—*Id.* Pl. Enl. 489.

Merle Draine, Temm. Man. d'Ornith. v. 1. p. 161.

Mistle-Drossel, Meyer, Taschenb. Deut. v. 1. p. 191.—Bechst. Tasschenb. Deut. v. 3. p. 324.

Missel-Thrush. Br. Zool. 1. No. 105.—Arct. Zool. 2. p. 341. 8.—*Will.* (Ang.) p. 187. t. 36.—Lewin's Br. Birds, 2. t. 57.—*Lath.* Syn. 3. p. 161. *Mont.* Ornith. Dict.—*Id.* Sup.—*Pult.* Cat. Dorset. p. 10.—*Bewick's* Br. Birds 1. p. 96.—*Id.* Sup.

PROVINCIAL,—Mistletoe-Thrush, Storm Cock.

THE Missel-Thrush is the largest of its tribe, and is indigenous in Great Britain; but its distribution is not so extensive, nor locally so abundant, as that of the Song-Thrush and Blackbird. It appears to be more numerous in the western counties than in any other parts; but it has made its appearance within these few years, and been rapidly increasing, in Northumberland. Except during the period of the production of its young, it is a bird of shy and retired habits, frequenting the outskirts of woods, or extensive pastures, where it feeds upon worms and other insects.

Food. During the winter, it lives chiefly upon the berries of the mistletoe and juniper, with those of the hawthorn, holly, and ivy. It possesses a very powerful note, and, in case of

mild weather, its song is often heard as early as the month of January. It usually sings from the highest branch of some tall tree, continuing daily to serenade its mate during the time of incubation, but becomes silent as soon as the young birds are hatched. It is very courageous in the breeding season, attacking indiscriminately all other birds that approach its nest; and I have sometimes witnessed its resolute and successful defence against that fatal enemy to eggs and young broods, the magpie. When disturbed, or engaged in contest, it utters a harsh kind of scream. It seldom mingles with the other species of thrushes, but more frequently associates in small families during the winter, and which resort to extensive pasture and meadow lands.

The place chosen for nidification is commonly the cleft of Nest, &c. a tree, and the nest is formed externally of white moss and coarse grass, interwoven with wool, the whole being lined with the fine stalks of dead grasses.

In this depositary it lays four or five eggs, of a greenish-white, spotted, and speckled with chestnut-brown and clove-brown.

PLATE 44. Fig. 1. Natural size.

Bill blackish-brown; the base of the upper mandible ochre-yellow. Irides brown. Head and upper part of the body light hair-brown, passing into oil-green upon the rump. Greater wing-coverts and quills dark hair-brown, margined with ash-grey and greyish-white. Tail deep ash-grey, the outer feathers being tipped with white, and the inner web of the outermost feather also white. Throat, chin, and cheeks white, with triangular blackish-brown spots. Breast, belly, and vent, yellowish-white, passing into straw-yellow, with numerous blackish-brown spots on the flanks and under tail-coverts.

General description.
Adult Male.

Feathers of the tibia white. Legs pale wood-brown. The female is similar in plumage to the male bird.

Young
bird.

The young, before the autumnal moult, have the head and back part of the neck greyish-white, more or less clouded with hair-brown. Lower part of the back and rump the same. Upper part of the back and wing-coverts hair-brown, the centres of the feathers yellowish-white, and the tips of the coverts blackish-brown. Greater coverts and quills brown, edged with yellowish-brown, under parts yellowish-white, spotted with blackish-brown. Legs inclining to wine-yellow.

It is subject to considerable variety, and is frequently found with the wings and tail white; sometimes it is entirely white, besides other variations of plumage enumerated by TEMMINCK.

FIELDFARE.

MERULA PILARIS.

PLATE XLV. FIG. 1.

Turdus pilaris, *Linn.* Syst. 1. p. 291. 2.—*Faun. Suec.* No. 215.—*Gmel.* Syst. 1. p. 807.—*Lath.* Ind. Ornith. v. 1. p. 330. sp. 11.—*Raii* Syn. p. 64. A. 3.—*Will.* p. 38. t. 37.—*Briss.* 2. p. 214. 5.

La Litorne ou Tourdell, *Buff.* Ois. v. 3. p. 301.—*Id.* Pl. Enl. 390.

Merle Litorne, *Temm.* Man. d'Ornith. v. 1. p. 163.

Wachholder-Drossel, *Bechst.* Tasschenb. Deut. v. 1. p. 145.—*Id.* Naturg. Deut. v. 3. p. 336.—*Meyer*, Tasschenb. Deut. v. 1. p. 193.—*Frisch.* t. 26.

Fieldfare or Feldefare, *Br. Zool.* 1. No. 106.—*Arct. Zool.* 2. p. 320. A.—*Will.* (Ang.) p. 188. t. 37.—*Albin.* 1. t. 36.—*Lewin's Br. Birds.* 2. t. 60.—*Lath.* Syn. 3. p. 24. 11.—*Mont. Ornith.* Dict.—*Haye's Br. Birds.* t. 31.—*Pult. Cat.* Dorset. p. 10.—*Bewick's Br. Birds.* v. 1. p. t. 98.—*Low's Fauna Orcad.* p. 56.

PROVINCIAL,—Feltyfare, Fendyfare.

Periodical
visitant.

THE summer retreat, or polar migration of this bird, being farther towards the north than the utmost latitude of our island, it becomes a periodical visitant with us, as a return to warmer latitudes on the approach of autumn, or after it has performed the duties attendant on the propagation of its species.

Of all our winter visitants, it is the latest in its arrival, seldom reaching these shores before the latter part of November, as I have ascertained by a registry of its first appearance for some years past, although by many ornithologists it has been said to appear with or before the Redwing; but I have invariably found the latter preceding the arrival of the Fieldfare by some weeks*. On the Northumbrian coast, it always arrives with the wind at north-east or east. As its first appearance is so much later than that of its fellows in migration, so also is its departure in the spring; and I have for many years noticed flocks of these birds remaining on our coast as late as the latter part of May, or the first week of June. During its abode with us, it continues in large flocks, and, as long as the weather remains mild, frequents the meadow and pasture grounds, feeding upon slugs, worms, and the larvæ of insects.

Food.

In severe frosts, and when the ground is covered with snow, it resorts to the hedges, and to small plantations, where it subsists upon the berries of the hawthorn, holly, mountain-ash, and some others. It is a bird of shy disposition, and, unless pressed by hunger, and reduced by want, will not allow of any near approach to it. Highly as the flesh of the Fieldfare was prized by the Romans, I have not found it to exceed in flavour that of the Mistletoe Thrush, and the others of its tribe, possessing also a bitterness from which some of them are free. MONTAGU states that Fieldfares roost upon the ground: this may be the case in a mild season, but I have seen them at other times flock by hundreds at nighfall to fir plantations, where they roosted upon the trees.

This bird builds in pine or fir trees, in Norway, Sweden, Lapland, and other northern countries, laying from three to five eggs, of a pale bluish-green colour, spotted with reddish-brown.

* I have frequently found the Mistle-Thrushes that assemble in small flocks early in autumn mistaken for *Fieldfares*; and thus an earlier arrival in this country assigned to the latter species than it is entitled to.

PLATE 45. Fig. 1. A male bird, of the natural size.

General description.

Bill deep ochreous-yellow, with the tips of the mandibles black. Irides dark brown. Crown of the head, ear-coverts, and nape of the neck, pearl-grey; the former having dark spots. Upper part of the back and wing-coverts deep umber-brown, margined paler. Lower part of the back and rump pearl-grey. Quills blackish-brown, edged paler. Tail black. Chin, middle of the belly, and under tail-coverts, white. Sides of the neck, and breast, ochreous-yellow, with oblong blackish-brown spots, nearly confluent, and forming a patch on the side of the breast. Sides and flanks with large triangular blackish-brown spots. Legs and claws blackish-brown. The head of the female is more clouded with brown; the lower part of the back yellowish-grey; and the legs paler than in the male bird.

SONG-THRUSH.

MERULA MUSICA.

PLATE XLV. FIG. 2.

Turdus musicus, Linn. Syst. 1. p. 292. 2.—*Gmel.* Syst. 1. p. 809.—*Lath.* Ind. Ornith. v. 1. p. 327.—*Raii* Syn. p. 64. A. 2.—*Will.* p. 138. 37.

Turdus minor, Briss. 2. p. 205. 2.

La Grive, Buff. Ois. v. 3. p. 280.—*Id.* Pl. Enl. 406.

Merl Grive, Temm. Man. d'Ornith. v. 1. p. 164.

Sing-Drossel, Bechst. Naturg. Deut. v. 3. p. 349.—*Meyer*, Tasschenb. Deut. v. 1. p. 195.—*Frisch.* Vög. t. 27. f. 1.

Throstle or *Song-Thrush*, Br. Zool. 1. No. 107.—Arct. Zool. 2. p. 342.—

Albin. 1. t. 34.—*Lewin's Br. Birds*, 2. t. 58.—*Lath.* Syn. 3. p. 18. 2.—*Id.*

Sup. p. 139.—*Mont.* Ornith. Dict.—*Walc.* Syn. 2. t. 198.—*Pult.* Cat.

Dorset. p. 10.—*Bewick's Br. Birds*, 1. p. 100.—*Low's Fau.* Oread. p. 57.

—*Shaw's Zool.* v. 10. p. 174.

PROVINCIAL.—Throstle Cock, Mavis, Grey Bird.

THIS well known songster, whose sweetly variable notes enliven our groves from the commencement of spring to the close of summer, is indigenous in Britain, as the greater part

of those bred in the island remain stationary through the whole year. But these our native birds are augmented by the visits of vast flocks, in the course of their autumnal journey from the more northern countries of Europe. These last generally make their appearance before the Redwing and Fieldfare, and, after recruiting their strength for a few days, move onward in a southerly direction. Like many of our other autumnal visitants, they arrive with a north or north-east wind, plainly indicating the countries from whence they hold their progress. The Thrushes which remain with us, never associate in flocks during the winter, like the two above-mentioned species, but continue dispersed throughout the country, haunting the thickets and hedges, where they find a supply of insects and slugs, and of such berries as form their principal food during the inclement season of the year. Upon the approach of very severe frosts, or falls of snow, I have observed that they move from the interior of the country towards the sea-coast, where the influence of the sea-breeze soon dissolving the snow, exposes a portion of ground sufficient to furnish them with a scanty subsistence. If the season should prove temperate, the male bird begins to pour forth his love-notes as early as the latter part of January, or the beginning of the month following. In March the pair commence nidification, and the first brood flies about the month of May.

The nest is composed of grass and mosses closely interwoven, and the inside is plastered over with a composition of rotten wood and clay, which, as MONTAGU observes, is usually so compactly wrought as to retain water, on which account a rainy season is often the destruction of the eggs.

It is placed in thorn-bushes or young trees, sometimes on the stump, or against the side of a tree, particularly of one embraced by ivy. The eggs are four or five in number, and their colour is bluish-green, spotted with black.—Insects and Food. worms compose the food of the Thrush during the summer, and the animal that inhabits the *Helix nemoralis* is also a

favourite repast. For this purpose, it breaks the shell by repeated strokes upon a stone; and numerous remains of these shells may be seen around particular selected stones, generally on some pathway or bare spot of earth, where these birds and their congeners abound. As summer advances, it approaches our gardens, feeding with avidity upon all the smaller sorts of fruit; and, when these fail, upon the approach of winter, it attacks the mountain-ash and other wild berries, which, as I have before observed, constitute its chief support.

PLATE 45. Fig. 2. Natural size.

General Description.

The head and upper parts yellowish-brown, with a tinge of oil-green. Greater wing-coverts margined with pale orange. Quills and tail brown, edged with oil-green. Sides of the neck, and upper part of the breast, pale ochreous-yellow, with arrow-shaped brownish-black spots. Throat pure white. Middle of the belly and the flanks white, with blackish-brown spots. Under wing-coverts pale reddish-orange. Legs pale flesh-red. Bill blackish-brown. The base of the under mandible straw-yellow.

The female is very similar to the male bird in plumage, but has less of the yellow upon the neck and breast. Varieties of a perfect white, or of white streaked with brown, sometimes occur.

REDWING.

MERULA ILIACA.

PLATE XLV. FIG. 3.

Turdus Iliacus, *Linn.* Syst. 1. 292. 3.—*Gmel.* Syst. 1. p. 808. sp. 3.—*Lath.* Ind. Ornith. v. 1. p. 329. 7.—*Raii* Syn. p. 64. A. 4.—*Will.* p. 139.—*Briss.* 2. p. 208. 3. t. 20. f. 1.
Le Mauvis, *Buff.* Ois. v. 3. p. 309.—*Id.* Pl. Enl. 51.
Merle Mauvis, *Temm.* Man. d'Ornith. v. 1. p. 165.
Roth-Drossel, *Bechst.* Naturg. Deut. v. 3. p. 360.—*Meyer*, Tasschenb. Deut. v. 1. p. 196.—*Frisch* t. 28. f. 1. and 2.
Redwing, Swinepipe, or Wind-Thrush, Br. Zool. No. 108.—Arct. Zool. 2. 342. D.—*Lewin's* Br. Birds, 2. t. 59.—*Lath.* Syn. 3. p. 22. 7.—*Pult.* Cat. Dorset. p. 10.—*Walc.* Syn. 2. t. 199.—*Mont.* Ornith. Dict.—*Bewick's* Br. Birds, 1. p. 102.—*Low's* Fau. Orcad. p. 57.
Redwing Thrush, *Shaw's* Zool. v. 10. p. 183.

THIS species, like the Fieldfare, is a periodical visitant, Periodical visitant. and generally makes its appearance a few weeks prior to that bird, arriving upon our north-eastern coasts about the middle or latter part of October. During its residence here, it remains gregarious, and haunts the meadows and pastures as long as open weather continues; on the approach of frost, repairing to woods and hedges, where the hawthorn, holly, and some other trees, afford, by their berries, the necessary means of subsistence. Should the weather prove very severe, or a failure of food occur, they continue their migration southward, an instance of which happened in the winter of 1822. In the first storm of snow, which lasted for nearly three weeks, large flocks of Fieldfares and Redwings were collected about the hedges, and on the outskirts of woods, where they lived upon the berries of the hawthorn, and which, fortunately for them, were in great abundance. This supply, however, rapidly decreased; but before its total failure, a few days of thaw intervened previous to the commencement of the second severe storm. Taking advantage of this change of weather, they were enabled to pursue a more ex-

tended southern migration, and scarcely an individual was afterwards seen in Northumberland. MONTAGU mentions, that, in the hard winter of 1799, vast numbers of these birds resorted to the west of England, where a sudden fall of snow deprived them of all food, and being previously too much reduced for farther travel to a warmer climate, thousands of them, as well as of Fieldfares, perished from starvation. The same accident occurred in the year 1814, the winter of which proved particularly fatal to the Thrush tribe, to Larks and other small birds, as was evinced in the striking diminution of their numbers for some years afterwards. The habits of this bird are very similar to those of the other species.—It has a clear and melodious note, and its song, when in its native or summer residence, is said to be scarcely inferior to that of our common Thrush. Upon the approach of spring it returns to the northern provinces of Europe, where it breeds, and passes the summer. It is very abundant in Sweden, Norway, Lapland, and Russia.—In these countries Nest, &c. it inhabits the woods and thickets adjoining to low or marshy tracts, and builds in maple, birch, and other trees, laying from four to six eggs, of a bluish-green colour, marked with blackish-brown spots.—In addition to fruits and berries, it Food. feeds upon insects and worms.

PLATE 45. Fig. 3. Natural size.

General description.

Head and upper parts deep hair-brown, tinged with oil-green. The space between the bill and eye black, intermixed with yellow. Over each eye is a large white streak. Sides of the neck, breast, and flanks white, with numerous large oblong blackish-brown spots. Belly pure white. Under wing-coverts deep reddish-orange. Legs pale wood-brown, inclining to flesh-coloured red.

The female is similar to the male, except that her colours are not so bright.

White and cream-coloured varieties are sometimes found.

BLACKBIRD.

MERULA VULGARIS, Ray.

PLATE XLV. FIG. 4., and PLATE XLIII. FIG. 2.

Turdus Merula, *Linn. Syst.* 1. p. 295. 22.—*Gmel. Syst.* 1. p. 831.—*Lath. Ind. Ornith.* v. 1. p. 340. 50.—*Raii Syn.* p. 65. A. 1.—*Will. p. 140.* t. 37. Le Merle, *Buff. Ois.* v. 3. p. 330.—*Id. Pl. Enl.* 2. the male, and 555. the female.

Merle noir, *Temm. Man. d'Ornith.* v. 1. p. 168.

Schwartz-Drossel, *Bechst. Tasschenb.* Deut. p. 149.—*Id. Naturg. Deut. v. 3.* p. 376.—*Meyer, Tasschenb.* Deut. v. 1. p. 199.—*Frisch. t. 29.*

Merula leucocephalus, varia et candida, Briss. v. 2. p. 230. 231. 232.

Blackbird, *Br. Zool.* No. 109. t. 47.—*Arct. Zool.* 2. p. 345. I.—*Will. Ang. p. 190.*—*Lewin's Br. Birds,* 2. t. 61.—*Lath. Syn.* 3. p. 43. 46.—*Id. Supp. p. 141.*—*Mont. Ornith. Dict.*—*Bewick's Br. Birds,* v. 1. p. 94.—*Pult. Cat. Dorset.* p. 10.—*Low's Fau. Orcad.* p. 58.—*Shaw's Zool.* v. 10. p. 225.

THIS bird is well known as a native of the British Islands. It is of a shy and restless disposition, always anxious to escape from observation, and generally successful in that effort, as it hops with singular celerity through the closest hedges or thickets, and its presence is often only known by the note it utters on alarm. It never associates ostensibly, preferring a solitary life, which it passes in woods or in well inclosed situations, where the hedges afford it an abundant supply of provision for the winter.—It also feeds upon worms and insects, and, like the Thrush, is particularly fond of the *Helix nemoralis*, to obtain the snail of which it pursues the same process as that bird *.

The notes of the Blackbird are rich and full, but destitute of that varied power of melody which distinguishes the song of the Common Thrush.—It commences building its nest in Nest, &c. March, or the beginning of April; and a thick bush, or an

* In the beginning of November, vast flocks of Blackbirds make their appearance upon our coasts, from more northern countries. They remain but a few days to recruit, and then resume their flight in a south-westerly direction.

ivy-clad tree, is usually the chosen situation. The nest is composed of moss, small sticks, and fibres of root, plastered with mud internally, and afterwards lined with fine dry grass. Here it deposits four or five eggs, of a bluish-green colour, blotched with darker variegations. Like the Thrush, it is frequently kept in confinement, and may be taught to whistle a variety of tunes, as well as to imitate the human voice.

PLATE 45. Fig. 4. Male bird, of the natural size.

General description.
Male bird.

Bill and orbits of the eyes king's-yellow. The whole of the plumage black. Legs blackish-brown, varied with wood-brown.

PLATE 43. Fig. 2. Natural size.

Female.

The female bird is of a brownish-black. Throat white, spotted with blackish-brown. Lower part of the neck and breast pale umber-brown, the margins of the feathers passing into greyish-white. Bill and legs blackish-brown. Belly and inner tail-coverts greyish-black.

The young are similar to the females; and the male birds do not acquire the perfect yellow bill till after the second moult.

Varieties of a pure white, and of an ash-grey colour, with livid bill, and reddish irides, are sometimes met with.

RING-OUZEL.

MERULA TORQUATA.

PLATE XLIV. FIG. 2.

Turdus torquatus, *Linn.* Syst. 1. p. 296. 23.—*Gmel.* Syst. 1. p. 832.—*Lath.* Ind. Ornith. v. 1. p. 343. 56.

Merula torquata, *Briss.* 2. p. 225. 12.—*Raii* Syn. p. 65. A. 2.

Le Merle à Plastron blanc, *Buff.* Ois. v. 3. p. 340. t. 31.—*Id.* Pl. Enl. 516. male.

Merle à Plastron, *Temm.* Man. d'Ornith. v. 1. p. 166.

Ring-Drossel, *Bechst.* Naturg. Deut. v. 3. p. 369. t. 4.—*Meyer*, Tasschenb. Deut. v. 1. p. 198.—*Frisch.* t. 30.

Ring-Ouzel, *Br. Zool.* 1. No. 110. t. 46.—*Arct. Zool.* 2. p. 344. H.—

Will. Angl. p. 194.—*Lewin's Br. Birds*, 2. p. 62.—*Lath.* Syn. 3. p. 46. 49.

—*Id.* Sup. p. 141.—*Mont.* Ornith. Dict.—*Id.* Sup.—*Bewick's Br. Birds*, v. 1. t. p. 96.—*Shaw's Zool.* 10. 227. t. 21. bad figure from Buffon.

PROVINCIAL—Rock Ouzel, Tor Ouzel, Michaelmas Blackbird.

THE periodical visits of this bird to our coasts are contrary to others of its genus that migrate, viz. the Fieldfare, Redwing, and Common Thrush, as it arrives in the *spring*, and immediately resorts to the mountainous districts of England and Scotland, preferring those of the most stony and barren nature. In these situations it breeds, and rears its young.—The nest is usually placed on some steep bank, supported by a projecting stunted bush, or a tuft of grass or heath; sometimes also in the cleft, or in the shelf of a rock. In form and texture it resembles that of the Blackbird, and the eggs are very similar to those of the same bird, both in size and colour.—Its song, which it utters perched on the top of some stone or the summit of a rock, is confined to a few clear and powerful notes, not unlike those of the Missel-Thrush. Like most of its tribe, it is of a shy disposition, and does not readily admit of a near approach, except during the period when its nest contains unfledged young; at which time it most strenuously endeavours to divert the attention of the intruder by loud cries and feigned gestures. As

Periodical visitant.

autumn approaches, it quits its mountainous haunts, journeying southwards; and, about the latter part of October, leaves this kingdom for warmer climates, where it passes the winter.

It is common in Sweden, France, and Germany; but, according to TEMMINCK, is very rare in Holland.

PLATE 44. Fig. 2. Natural size.

General description.

Bill blackish-brown, having the base of the mandible yellowish. Upper parts of the body black, the feathers being margined with blackish-grey. On the upper part of the breast is a large crescent-shaped gorget of pure white; the rest of the under parts black, margined with grey. Greater wing-coverts deeply marginated with ash-grey. Tail black. Irides dark-brown. Legs blackish-brown.

The plumage of the female bird is more clouded with grey, and the pectoral gorget is smaller, and clouded with reddish-brown and grey. In the young females this gorget is not visible; and in the young males it is of a reddish-white.

Varieties are sometimes found similar to those of the Blackbird.

SUBFAMILY MYIOTHERINA.

The members of this subfamily, with the exception of the genus *Cinclus*, are all natives of the other quarters of the globe. Besides the genus *Myiothera* (ILLIGER), it embraces that of *Pitta* (VIEILL.), *Myophonus* (TEMM.), *Cinclus* (BECHST.), *Dasycephala* (SWAINS.), *Chamæza* (VIGORS), and various others. An intimate connection with each other, and with the remaining subfamilies of the Merulidæ, as well as with other groups of the Dentirostral tribe, is maintained by various species belonging to the above named genera;

but as the nature and extent of this work will not admit of my tracing the various affinities and circular disposition of each particular group, I refer my readers to the observations upon the *Merulidae* and other families of the Insessores, contained in the second volume of the "Northern Zoology."

GENUS CINCLUS, BECHST. DIPPER.

GENERIC CHARACTERS.

Bill rather slender, straight, or with a very slight inclination upwards, compressed at the sides, and the tomia bending inwards; upper mandible emarginated at the tip, and bending over the lower one. Nostrils basal, lateral, and naked; longitudinally cleft, and partly covered by a membrane. Head small, the forehead narrow and low. Body short and compact. Feet with three toes before and one behind; the outer toe joined at its base to the middle one. Tarsus longer than the middle toe. Claws slightly curved, and compressed; that of the hind toe the largest. Wings short, the first quill being not half the length of the second, which also is shorter than the third and fourth.

This interesting genus, which, in habits, presents so curious an anomaly with the rest of the *Insessores*, and which, in former artificial systems, held, as it were, an isolated station, has, by both VIGORS and SWAINSON, been classed with the *Myiotherinae*; with several of which it has been found, by a careful analysis, to be connected in direct affinity. In addition to the common species (the European Dipper) and the *Cinclus Pallasii*, mentioned by TEMMINCK, another species has been discovered (*Cinclus Americanus* of SWAINSON) inhabiting Mexico, and the streams of the *Rocky Mountains*; and a fourth, perfectly distinct from *Cinc. Pallas.*, is also mentioned by MR SWAINSON, as seen by him from India.

EUROPEAN DIPPER.

CINCLUS AQUATICUS, Bechst.

PLATE XLV*.

- Cinclus aquaticus, Bechst.* Naturg. Deut. v. 3. p. 808.—*Meyer*, Tasschenb. Deut. v. 1. p. 207.
Sturnus Cinclus, *Gmel.* Syst. 1. p. 803. sp. 5.—*Linn.* Syst. 1. p. 290. 5.
Turdus Cinclus, *Lath.* Ind. Ornith. v. 1. p. 343. sp. 57.
Merula aquatica, *Briss.* v. 5. p. 252. 19.—*Raii* Syn. p. 66. A. 7.—*Will.* p. 104. t. 24.
Le Merle d'Eau, *Buff.* Ois. v. 8. p. 134. t. 11.—*Id.* Pl. Enl. 940.
Cincle Plongeur, *Temm.* Man. d'Ornith. v. 1. p. 177.
Wasser Spreauw, *Sepp.* Nederl. Vög. v. 1. t. p. 25.
Water Ouzel, *Br. Zool.* 2. No. 111.—*Arct. Zool.* 2. p. 332. 8.—*Will.* (Ang.) p. 149.—*Lewin's Br. Birds*, 2. t. 63.—*Lath.* Syn. 3. p. 48. 50.—*Id.* Supp. p. 142.—*Mont. Ornith. Dict.*—*Id.* Supp. and App. to Supp.—*Wale.* Syn. 2. t. 196.—*Don*, *Br. Birds*, t. 24.—*Bewick's Br. Birds*, v. 2. p. 16.

PROVINCIAL—Water-Crow, Water-Piet, Bessy-Ducker.

THESE interesting little birds are natives of our island, but, from their peculiar habits, are confined to certain districts; those only where they can meet with clear and rocky streamlets. It is therefore in the mountainous tracts of Scotland and Wales, in some of the northern counties of England, in parts of Devonshire, and probably in Derbyshire, that we must look for these wild and solitary songsters. They are generally seen single, or in pairs, and always on the margin of the stream, or perched in their particular attitude, on some projecting stone in the middle of the water. From such situations I have repeatedly seen them dive below the surface, and remain submerged for a considerable time, occupied in pursuing the fry (or young fish), or in search of the larvæ of aquatic insects. At other times they walk slowly into the water from the shallow part of a pool, till it becomes of sufficient depth for diving; but I have not been able, even from close observation, to certify the fact repeated by some naturalists, of their walking with apparent ease at the bottom; and which error of opinion might arise from the man-

ner of their occasionally entering the water as above stated. On the contrary, the same exertion seems to be used by them as by other diving birds, an idea also entertained by MONTAGU, to whose pleasing description of the habits of this species I refer my readers.* I have had an opportunity of bestowing attention on the manners of these birds, a pair having, for some years, built in a mass of rock rising from a rivulet at a very short distance from my residence. They are very early breeders, and their first family is, in general, fully fledged in the beginning of May. The young quit the nest before they are able to fly to any considerable distance: indeed, upon being disturbed, although but half fledged, they immediately leave it, diving with great ease the moment they reach the water, which the parent birds contrive shall be effected with expedition, as they most commonly build their large mossy nest in such part of the rock as directly overhangs the stream.

The situation of their nest is readily discovered, when occupied by the young birds, from their incessant chirping. It is similar in shape to that of the Wren, composed externally of moss, and lined with the decayed leaves of oak and other trees. The eggs are four or five in number, of a transparent white. When perched, this bird uses a constant dipping motion, at the same time flirting its tail, which is carried rather erect, in the same manner as that of the Wren. Water insects and the fry and spawn of fish form its food. Its song is variable, and it begins to utter its strong and distinct notes very early in the spring, and is the first warbler that cheers a visitor to the lonely and romantic situations it usually frequents. It is rather generally diffused throughout Europe, inhabiting similar localities to those in Britain. During the severity of winter it leaves the smaller mountain rivulets (then becoming frequently choked with ice and snow), and resorts to the larger streams which remain open,

* See MONT. Ornith. Dict. Supplement, and Appendix to Supplement.

and afford it a plentiful supply of food. This I have often observed with respect to the Tweed, and to the Annan in Dumfriesshire, upon both of which rivers it is numerously distributed during winter, but is comparatively rare in the summer and breeding season. In the latter river, when partially frozen over, I have repeatedly seen it dive from the edge of the ice into the rapid stream, and, after a submersion of some seconds, reappear with a small fish, or a caddis-worm (the larva of a species of *Phryganea*) in its bill.

PLATE 45*. represents a male bird and female bird of the natural size.

General description.

Head and back part of the neck umber-brown. Upper parts black, the feathers margined with blackish-grey. Throat, eyelids, sides of the neck, and upper part of the breast white. Lower part of the breast and belly chestnut-brown, passing into brownish-black towards the vent. Under tail-coverts blackish-grey. Bill blackish-brown. Legs yellowish-grey. Irides yellowish-brown. The female is similar to the male, except that the head is of a deeper brown, and the white upon the neck and breast is sullied in hue.

The young are distinguished by the deep-grey feathers that cover the head and back part of the neck. In them the white also extends lower down the belly towards the vent, and is crossed by fine rays of yellowish-grey or brown.

A large variety with a dusky bar encircling the bottom of the neck, and the white of the breast and belly having numerous small black streaks pointing downwards, is mentioned by LATHAM, in the Second Supplement to his General Synopsis, under the title of the *Penrith Ouzel*. The other two varieties mentioned in the Appendix to MONTAGU's Supplement, I should consider as belonging to a very late brood of the preceding year, and which had not acquired the complete plumage of maturity.

SUBFAMILY ORIOLANA.

This group, in addition to the true Orioles (genus *Oriolus*, as now restricted), embraces the genera *Sericulus* of SWAINSON (represented by the splendid *Sericulus Chrysocephalus*, a native of New Holland); *Mimeta* of VIGORS; *Irena* of Horsfield; and various others. Its connexion with the Short-legged Thrushes (subfamily *Brachypodina*), is supported by the intervention of *Turdus Palmarum* (Palm Thrush of authors), which, in form and habits, makes a near approach to the typical Orioles; while the lengthened tarsus and larger foot of the genus *Sericulus*, seems to lead the way to the Strong-legged Thrushes (subfamily *Crateropodina* of SWAINSON), of which we possess no examples in Britain.

GENUS ORIOLUS, TEMM. ORIOLE.

GENERIC CHARACTERS.

Bill as long as the head; broad and angular at the base; compressed towards the tip, and forming a prominent culmen throughout its length; strong, gently arched, and sharp-pointed; the tomia cultrated, and bending a little inwards; the upper mandible emarginated, its tip deflected, and longer than the lower one. Nostrils basal, lateral, ovoid, and naked. Wings having the first quill half the length of the second; and the third the longest. Tarsus shorter, or, at most, not longer than the middle toe. Feet with three toes before and one behind; short, and formed for perching; connected at the base. Hind toe very strong. Claws much curved, and very sharp; that of the hind toe being the largest.

The genus Oriole, as established by Mons. TEMMINCK, comprehends those species only of the extensive genus *Oriolus* of former authors, that inhabit the Old Continent.

The other forms, which are all natives of the New World, and were heretofore included in the genus by GMELIN, LATHAM, and others, belong to a different *tribe*, of the order *Insessores*; constituting a part of the family of *Sturnidae*, of the *Conirostral* tribe.

Yellow and black are the prevailing colours of the male birds of most of the species of this genus. They inhabit wooded districts, and usually live in pairs; but assemble in small flocks previous to migration. Their food consists of insects, larvæ, fruits, and berries.

They evince great art in building their nests, most of them selecting the fork of some small branch, from which the nest is suspended by its rim. The Golden Oriole is the only known species in Europe, and is migratory.

GOLDEN ORIOLE.

Oriolus Galbula, Linn.

PLATE XXXV. FIG. 1. AND 2.

- Oriolus Galbula, *Linn.* Syst. 1. p. 160. 1.—*Gmel.* Syst. p. 382. sp. 1.—*Lath.* Ind. Ornith. v. 1. p. 186. sp. 45.
Coracias Oriolus, Fauna Suec. No. 95.
Galbula, Raii Syn. p. 68. 5.—*Will.* p. 147. t. 36. 38.
Oriolus, Briss. 2. p. 320. t. 58.—*Id.* 8vo. 1. p. 247.
Le Loriot, Buff. Ois. v. 3. p. 254. t. 17.—*Id.* Pl. Enl. 26. the male.—*Temm.* Man. d'Ornith. v. 1. p. 129.
Gelbe Rache, Bechst. Naturg. Deut. v. 2. p. 1292.
Gelber Pirol, Meyer, Tasschenb. Deut. v. 1. p. 108.
Witwall, Will. (Ang.) p. 198.
Yellow Bird from Bengal, Albin. 3. t. 19.
Golden Thrush, Edw. t. 185.
Golden Oriole, Br. Zool. App. p. 41. t. 4.—*Lewin's Br. Birds,* 2. t. 43.—*Lath.* Syn. 2. p. 449. 43.—*Id.* Supp. p. 89.—*Mont. Ornith. Dict.*—*Id.* Supp.—*Don, Br. Birds,* 1. t. 7.—*Bewick's Supp. to Br. Birds.*

Occasional visitant.

THIS striking and elegant bird is but an occasional visitant in Britain. In addition to the instances mentioned by PENNANT and MONTAGU, of its being taken in these kingdoms, two specimens (a male and female) that were killed

in the neighbourhood of the Pentland Hills, are now in the Edinburgh Museum, and furnished the drawings for the present work. Another female bird was also taken in a garden at Tynemouth, in Northumberland, in the spring of the year 1821; and two or three additional instances of its capture in England have since been recorded. Upon the continent it is of more frequent occurrence, and breeds in some parts of France and Italy.—It inhabits woods and thickets, Food. and feeds upon berries, grapes, and other fruits, as well as on insects.—The nest is formed of straw and dried grasses, Nest, &c. intermixed with wool (which also frequently composes the principal part of the internal coating), and is artfully suspended by its outer rim to the extreme fork of some lofty branch. It lays four or five eggs, white, with isolated dark-brown spots. The young are fed with insects, &c., and the parents are observed to be particularly assiduous in the support, and bold in the defence, of their progeny. The singular and well-chosen situation of the nest, indeed, argues a superior degree of parental instinct.

This bird migrates from Europe about September, and is supposed to winter in the warmer regions of Asia and Africa.

PLATE 35. Fig. 1. The adult male, natural size.

Form typical. Bill orange-red. Between the eye and bill is a black streak. Irides reddish-brown. Head, neck, back, and under parts, yellow. Wings black, having the outer webs margined with white. Greater wing-coverts tipped with yellow. The two middle tail-feathers black, the rest half-black half-yellow. Legs and toes black.

General description.

Male bird.

Fig. 2. The female; also of the natural size.

Upper parts olive-green. Throat and breast greyish-white, with dusky streaks. Belly and vent white, tinged more or less with yellow, and streaked dusky. Wings brownish-black, edged with pale oil-green. Tail deep

General description.

Female.

oil-green, with the tips of all the feathers, except the two middle ones, yellowish-white.

The young birds are similar to the female.

FAMILY IV. SYLVIADÆ.

We now enter upon the family of *Sylviadæ* or Warblers, that assemblage of the lesser species, so eminently distinguished for gracile and elegant form, and for a (comparatively) delicate structure of bill. By LINNÆUS the greater portion of the birds of this family then known were arranged under the genus *Motacilla*, which LATHAM afterwards divided, restricting *Motacilla* to the Wagtails generally so called, and establishing his genus *Sylvia* for the reception of the other slender-billed birds. This latter genus then became the recipient of almost every bird of a certain size and possessing a slender bill, without regard to the various discriminating shades of character, both in form and habits, which are found to exist, and separate the various species into groups of different value and extent. This indiscriminate association of such a variety of forms under one generic head, involved, as might be expected, the whole series in the greatest confusion; and it was only from the labours of VIGORS, SWAINSON,* and other eminent ornithologists, who pursued the analytic method, and strictly investigated the direct affinities of the various species contained in this genus, as well as their bearings with regard to other tribes and families, that the importance of their station in the natural arrangement, became apparent; and that the necessity of their separation into groups of different value was generally admitted.

Like the other families of the *Insessores*, that of *Sylviadæ*

* I must here refer my readers to MR SWAINSON's observations upon the natural arrangement, &c. of the *Sylviadæ*, contained in the 2d vol. of the "Northern Zoology," as the limits of this work will not admit of my entering into the necessary detail.

is divided into five primary groups or circles, each returning into itself: viz. 1st, The subfamily *Saxicolina*, represented by the genus *Saxicola* of BECHSTEIN, which also from its near affinity to the Rock Thrushes (genus *Petrocincla*, VIG.) becomes one of the links between the *Sylviadæ* and *Merulidæ*; 2dly, *Philomelina*, of which the Nightingale may be taken as a typical example, the members of which are most of them remarkable for their vocal powers; 3dly, *Sylviana*, the pre-eminently typical group of the whole family, and of which the Gold-crests (genus *Regulus*) are by MR SWAINSON considered the type; 4thly, *Pariana*, represented by the genus *Parus*; and, 5thly, The subfamily *Motacillina*, of which the genus *Motacilla* of LATHAM is to be considered the typical form.

SUBFAMILY SAXICOLINA.

This subfamily, forming one of the aberrant groups of the *Sylviadæ*, contains, besides the *Chats*, or the typical genus *Saxicola* (BECHST.) that of *Erythaca* (SWAINS.), of which our Redbreast is the type, and represented in America by the Bluebirds belonging to SWAINSON's genus *Sialia*. The Redstarts (gen. *Phœnicura*, SWAINS.) also appear to have their station here rather than in the subfamily *Philomelina*, to which, however, they directly lead the way; and the genus *Petroica* (SWAINS.), an Australian group, represented by the *Muscicapa Erythrogaster* of LATHAM, is also associated with the present subfamily, but stands, as it were, upon the confines of it; and by the depression of the basal part of the bill and hairy gape, conducts us, by its affinity to the genus *Setophaga* (SWAINS.), to the subfamily *Pariana*, as well as to the Flycatchers of the *Fissirostral* tribe. The members of this subfamily, from the comparative length of the tarsus and structure of the feet, are calculated for active movements upon the ground, as well as for perching, and many of the typical species are the inhabitants of downs and

mountainous districts. Their food consists of insects, larvæ, and worms, which they seek for on the ground, and in the recesses where they lie in concealment.

GENUS SAXICOLA, BECHST. CHAT.

GENERIC CHARACTERS.

Bill straight, slightly carinated, and advancing upon the forehead, dilated at the base, the tip of the upper mandible a little bent, and emarginated ; gape bearded ; forehead rounded and high. Nostrils basal, lateral, and oval, partly concealed by a membrane. Tarsus considerably longer than the middle toe ; toes three before, and one behind ; the outer toe joined at its base to the middle one. Claws not much curved. Wings of mean length ; first quill scarcely half the length of the second ; which is shorter than the third and fourth, these last being the longest in each wing. Coverts and scapulars very short.

The species of the present genus are all inhabitants of the Old Continent, and frequent moors and other open wastes, sometimes at considerable altitudes. They live solitary, or in pairs, and are wild in disposition. Their food consists of insects and worms, which they chiefly take upon the ground. They run with much celerity, being enabled to do so by the great proportional length of the tarsus. The dilatation of the basal part of the bill, indicates an approach to some of *Muscicapæ* ; and they also form a connecting link with those of the *Merulidæ* that constitute the genus *Petrocincla* of VIGORS, and which inhabit mountains and other rocky situations. Many of the species are distinguished by the distribution of the black and white in the caudal feathers. The tail of these birds is continually flirted up and down.

WHEAT-EAR.

SAXICOLA OENANTHE, Bechst.

PLATE XLVIII. FIG. 1.

Saxicola Oenanthe, *Bechst.* Naturg. Deut.Sylvia Oenanthe, *Lath.* Ind. Ornith. v. 2. p. 529. 79.Motacilla Oenanthe, *Linn.* Syst. 1. p. 332. 15.—*Gmel.* Syst. 1. p. 966. sp. 15.*Retz.* Linn. Fau. Suec. p. 259. sp. 242.—*Raii* Syn. p. 75. A. 1.—*Will.* p. 168. t. 41.Vittaflora, *Briss.* 3. p. 449. 33.Le Moteux ou Vitrec, *Buff.* Ois. v. 5. p. 237.—*Id.* Pl. Enl. 554. f. 1. 2.Traquet Moteux, *Temm.* Man. d'Ornith. v. 1. p. 237.Graurückiger, Steinschmatzer, *Meyer*, Tasschenb. Deut. v. 1. p. 251. B.Wheat-Ear, Fallow Smich, or White Tail, *Br. Zool.* 4. No. 157.—*Arct.**Zool.* 2. p. 420. P.—*Lath.* Syn. 4. p. 465. 95.—*Id.* Supp. p. 182.—*Lewin's**Br. Birds*, 3. t. 110.—*Mont.* Ornith. Dict.—*Will.* (Ang.) p. 133. t. 41.—*Pult.* Cat. Dorset. p. 9.—*Walc.* Syn. 2. t. 241.—*Low's* Faun. Orcad. p. 72.White Rump, *Bewick's Br. Birds*, v. 1. p. t. 329. male.

THE Wheat-Ear, which is the largest of the British members of this genus, is migratory. It is among the earliest of our residents during the summer, generally appearing about the middle of March, and is also one of the latest in retiring to a warmer climate.

Its polar migration extends, in our direction, as far as the Orkneys, the bird being enumerated in Low's Fauna of those islands. It is rather numerously distributed through all the open districts of the kingdom, particularly on the Downs of Sussex and Dorsetshire, and on the dry sand-banks that edge various parts of our coasts. In this latter locality, it builds in the rabbit burrows that so generally occur.—Upon moors and downs it makes its nest under large stones, in old quarries, or in the interstices of dry walls. This is composed of moss and grass, intermixed with wool, and lined with the last mentioned material, or rather (if it can be obtained) with hair. The eggs, five or six in number, are of a pure bluish-green colour. The Wheat-Ear is a bird of handsome form, but of very wild and timid nature. Upon its first arrival, and also previous to its equatorial migration, it is extremely

fat, and of high flavour ; is then esteemed as a great delicacy, and considered little inferior to the Ortolan. It is of course in great demand, and vast numbers are annually caught upon the downs. The mode of entrapping them is simple, but singular ; and is effected by placing two turfs on edge, with a small horse-hair noose fixed to a stick at each opening. The bird, attempting to enter in search of food, or to escape from apprehended danger, is almost certain of being caught by one of the nooses *.

It is generally seen alone, or in pairs, and its migrations do not even appear to be performed in associated numbers.—Food. It hops with great celerity, and in this manner obtains its food on the ground, which consists of worms and insects, as also the larvae of the lepidopterous and dipterous orders. During the pairing season, its song is sweet in note, and pleasingly varied, and is frequently poured forth on the wing, whilst hovering over the female, or the site of the nest ; and at this period also its tail is displayed in a singular manner, by a lateral expansion of the feathers.—Its flight is smooth and rapid, but near the surface of the ground ; and it commonly alights upon the top of a small hillock, stone, or wall. Indeed this peculiarity attends both the other British species, which invariably chuse the very summit of the whin bush or plant on which they happen to perch.

I cannot but remark the circumstance of Mr STEPHENS (in his continuation of the “ General Zoology” commenced by the late Dr SHAW) having placed the present bird at the head of a new genus, which he has named *Vittaflora*, at the same time that he has left the Whin-Chat (*Saxicola rubetra*), and the Stone-Chat (*S. rubicola*), both precisely agreeing with the Wheat-Ear in generic characters and manners in the genus *Sylvia*. This is to be regretted, as inattention to correct classification tends so strongly to multiply the many

* PENNANT says, that as many as 1840 dozens of these birds have been taken in one year about Eastbourne in Sussex.

difficulties that already attend the progress of the ornithological student.

PLATE 48. Eig. 1. A male bird of the natural size.

From the corners of the mouth a black streak or patch passes each eye, and covers the orifices of the ear. Forehead, chin, and eye-brows, white. Upper parts bluish-grey. Wings brownish-black. Lower part of the neck and breast pale chesnut-brown. Belly and vent white. Tail (except the two middle feathers, which are wholly black) white for two-thirds of its length, commencing at the base, the remainder black. Legs and toes black. Bill black.

The female bird has the upper parts yellowish-brown, tinged with grey; the auricular patch brown, and not so much white upon the tail.

General description.

Male bird.

WHIN-CHAT.

SAXICOLA RUBETRA, Bechst.

PLATE XLVIII. FIG. II.

Saxicola Rubetra, *Meyer*, Tasschenb. Deut. v. 1. p. 252. B.

Sylvia Rubetra, *Lath.* Ind. Ornith. 2. p. 525. sp. 58.

Motacilla Rubetra, *Linnaeus*. Syst. 1. p. 332. 16.—*Gmel.* Syst. 1. p. 967. sp. 16.

Rubetra major, *Briss.* 3. p. 432. 26. t. 24. f. 1.

Œnanthe secunda, *Raii* Syn. p. 76. A. 3.—*Will.* p. 234.

Grand Traquet ou Tarier, *Buff. Ois.* v. 5. p. 224.—*Id. Pl. Enl.* 678. f. 2.

Traquet Tarier, *Temm. Man. d'Ornith.* v. 1. p. 224.

Braunkeliger, Steinschmatzter, *Bechst.* Naturg. Deut. v. 3. p. 684.—*Frisch.* t. 22. f. B. male.

Whin-Chat, Br. Zool. 1. No. 158.—*Will.* (Ang.) p. 234.—*Lath. Syn.* 4. p. 454. 54.—*Mont. Ornith. Dict.*—*Haye's Br. Birds*, t. 39.—*Lewin's Br. Birds*, 3. t. 109.—*Pult. Cat. Dorset.* p. 9.—*Bewick's Br. Birds*, v. 1. p. 231. male.

THIS is also a migratory species, but its appearance is considerably later than that of the Wheat-Ear, as it is seldom seen in the south of England before the middle of April, or in the northern counties till the end of that month. Like the two others of its tribe, it is of shy disposition, and is only

Periodical visitant.

Nest, &c. met with single or in pairs. It haunts open moorlands and commons, particularly those overrun with furze (whence comes its trivial name), or low brush-wood, and is rarely seen to alight on any but the uppermost spray of a bush.—It utters a pleasing, though hasty, song, either perched, or occasionally suspended on wing over the furze.—Its nest is placed upon the ground, amongst the grass, or in some low bush, most artfully concealed, and indeed only to be found by a very diligent search; as the bird does not enter immediately from above, but by a long and winding path made through the adjoining herbage. The nest is formed of dried grasses, with some moss intermixed, and lined with grass of a finer texture. The eggs, generally six in number, are of a fine greenish-blue colour, without spot or stain.—Worms and insects taken on the ground are the common food of this bird, but it also makes occasional short flights in pursuit of winged insects, returning, like the Flycatcher, repeatedly to the same spot.

Food.

According to MONTAGU, it is plentiful throughout England, except in Devonshire and Cornwall, where it is of rare occurrence. I have traced it pretty far into Scotland; but its polar migration does not extend so far as that of the Wheatear, the bird not being enumerated in the *Fauna Orcadensis of Low.*

PLATE 48. Fig. 2. A male bird, natural size.

General descrip-
tion.

From the base of the bill, and over the eyes, passes a white streak or band, reaching to the nape of the neck. Cheeks and ear-coverts dark-brown, or brownish-black. Chin and streak along the side of the neck pure white. Crown of the head, back, and wing-coverts, brownish-black; each feather being bordered with ochre-yellow. Rump yellowish-brown, streaked with blackish-brown. Base of the primary quills white. Base of the tail white; the two middle feathers black. Throat and breast pale orange-brown. Belly and vent white, tinged with yellow. Legs and toes black.

STONE-CHAT.

SAXICOLA RUBICOLA, Bechst.

PLATE XLVIII. FIGS. 3. AND 4.

- Saxicola rubicola, *Bechst.* Naturg. Deut. v. 3. p. 694.
Sylvia rubicola, *Lath.* Ind. Ornith. 2. p. 523. 49.
Motacilla rubicola, *Linn.* Syst. 1. p. 332. 17.—*Gmel.* Syst. 2. p. 969.
Rubetra, *Briss.* 3. p. 428. 25. t. 23. f. 1. male.
Œnanthe nostra tertia, *Raii* Syn. p. 76. A. 4.—*Will.* p. 169. t. 41.
Motacilla Tschecautschia, *Gmel.* Syst. 1. p. 997. sp. 175.
Le Traquet, *Buff.* Ois. v. 5. p. 215. t. 13.—*Id.* Pl. Enl. 678. f. 1.
Traquet Patre, *Temm.* Man. d'Ornith. v. 1. p. 246.—*Le Vaill.* Ois. d'Afriq. v. 4. pl. 180. f. 1. and 2. old male.
Swartzkehliger Stenischmatzer, *Bechst.* Naturg. Deut. v. 3. p. 694. t. 23. old male.
Stone-Chat, Br. Zool. 1. No. 159.—*Will.* (Ang.) p. 235. t. 41.—*Lath.* Syn. 4. p. 448. 46.—*Mont.* Ornith. Dict.—*Lewin's* Br. Birds, 3. t. 108.—*Albin.* 1. t. 52.—*Walc.* Syn. 2. t. 239.—*Pult.* Cat. Dorset. p. 9.—*Haye's* Br. Birds, t. 39.—*Bewick's* Br. Birds, v. 1. p. t. 233. male.

PROVINCIAL,—Stone-Chatter, Stone-Smick, Moor Titling.

THE Stone-Chat, unlike the two preceding species, is a resident through the whole year in this country, on open grounds and furzy commons, which are its appropriate haunts.—In its manners it resembles the Whin-Chat, feeding, like it, upon worms and insects, taken also occasionally Food. by a similar method. I have before noticed the peculiarity in these birds, of alighting upon the summit of the object on which they perch. It is frequently on the wing, from bush to bush, but always flying close to the ground. Its common call is a kind of clicking note, compared by BUFFON to the word *Oüistrata*; but, in the pairing season, its song (generally uttered as it hovers over the furze) is varied and agreeable. Like most of our indigenous birds, it commences nidiification very early in the spring; the spot selected being usually at the bottom of a whin or other bush, and the nest composed of moss and dry grass, lined with hair or feathers. It lays five or six eggs, of a greenish-blue colour, marked at the larger end with small reddish-brown spots.

The young, after quitting the nest, are assiduously attended by the parent birds, until fully capable of providing for themselves; upon which they separate, and are only to be seen single or in pairs. MONTAGU has conjectured that a partial migration takes place in autumn, as fewer of these birds are observed in winter than during the summer months. I have not lost sight of this suggestion, and am inclined to think that the greater part of the young of the year do migrate in the course of the winter, having repeatedly noticed (in places where the species is abundant) the disappearance of the young as winter approached, whilst the parent birds remained attached to their favourite spot. In very severe storms of snow, even those that winter here are sometimes compelled to quit their usual situations, and take refuge in more enclosed grounds, or in plantations.

PLATE 48. Fig. 3. A male in summer plumage, natural size.

General description.

Male bird.

Head and throat black. Sides of the neck, upper parts of the wings, and rump white. Breast orange-brown.

The remainder of the under parts white, tinged with yellow. Back black, the feathers being edged with yellowish-brown. Wings brownish-black; the feathers edged paler. Bill and legs black. In winter the black feathers of the head and throat are edged with yellowish-brown, which disappears as the spring advances.

FIG. 4. A female bird of the natural size.

Female.

Head and upper parts umber brown; the feathers being margined paler. Tail and wings brown, edged with yellowish-brown. Throat blackish-brown, mixed with white and yellowish-brown specks. Less white upon the wings and sides of the neck than in the male bird. Breast yellowish-brown.

GENUS ERYTHACA, SWAINSON. REDBREAST.

GENERIC CHARACTERS.

BILL broad, and rather depressed at the base, gently narrowing towards the tip, where it is but slightly compressed; of mean strength, with the upper mandible deflected at the tip, and emarginated. Tomia of both mandibles with a slight intraction near the middle. Nostrils basal, lateral, oval, pierced in a large membrane, and nearly concealed by the projecting feathers of the antiae. Gape bearded with thick bristly hairs. Wings having the first quill very short, the second double the length of the first, the third shorter than the fourth and fifth, which last are nearly equal, and the longest in the wing. Legs with the tarsi longer than the middle toe. The outer toe joined at its base to the middle one; the former and the inner toe short, nearly equal in length, and each reaching only to the second joint of the middle one. Claws not much hooked; that of the hind toe the longest. Form short and compact.

The Common Redbreast, the type of the genus, in its form and habits shews its decided affinity to the other members of this subfamily, and points to the situation it now holds, as more appropriate than when arranged in the subfamily *Philomclina*. Like *Saxicola*, it is as well adapted, from the length of the tarsus, and the form of the feet, for progression on the ground as for perching on trees, and is as frequently seen on the former situation, where also it obtains its food. It is closely related to the genus *Sialia* of SWAINSON, which is, indeed, its American representative; this latter genus differing principally in the proportions of the quill feathers, and the comparative shortness of the tarsi.

REDBREAST.

ERYTHACA RUBECULA, Swains.

PLATE XLVI. FIG. 2.

Sylvia rubecula, Lath. Ind. Ornith. v. 2. p. 520. sp. 42.
Motacilla rubecula, Linn. Syst. 1. p. 337. 45.—*Gmel.* Syst. 2. p. 993.—*Raii*
 Syn. p. 78. A. 3.—*Will.* p. 160. t. 37.—*Briss.* 3. p. 418. t. 21.
Rouge-Gorge, Buff. Ois v. 5. p. 196. t. 11.—*Id.* Pl. Enl. 361.
Bec-fin Rouge-Gorge, Temm. Man. d'Ornith. v. 1. p. 215.
Rothburstiger Sanger, Meyer, Tasschenb. Deut. v. 1. p. 238.—*Frisch,*
Vög. t. 19. f. 1.
 Redbreast, Br. Zool. No. 147.—Arctic Zool. 2. p. 417. D.—*Lewin's* Br.
 Birds, 3. t. 107.—*Lath.* Syn. 4. p. 442. 38.—*Mont.* Ornith. Dict.—*Walc.*
 Syn. 2. t. 238.—*Pult.* Cat. Dorset. p. 9.—*Bewick's* Br. Birds, v. 1. p. t.
 204.—*Low's* Faun. Orcad. p. 69.

PROVINCIAL—Robin Redbreast, Ruddock, Robin.

THIS well known and favourite warbler is common throughout the kingdom, its range extending as far as the Orkney Islands, where, according to Low, it is a regular resident. It appears, by a communication from Dr FLEMING to MR MONTAGU, that, in Shetland, the Redbreast is only an occasional visitant, seen after severe gales of wind; in all probability, therefore, driven thither out of the regular course of its autumnal migration from Norway and other northern countries to those of a milder temperature. As spring advances, the male bird retires to the thickest woods, and having attracted a mate by the rich and mellow notes that he pours forth from the highest branch of some chosen tree, Nest, &c. prepares for the duties that nature dictates.—A mossy bank, or spot well concealed by the roots of trees, or such clefts of rock overgrown with ivy and woodbine, as are of constant occurrence in the woody glens of the north of England and Scotland, are the situations usually selected for the nest *; which is formed of moss, the stalks of plants, and dead

* It also frequently breeds in garden sheds and out-houses; and I have known several instances where a watering pot, not in common use, has become the receptacle for the nest and eggs.

leaves, with a lining of hair. The eggs are from five to seven in number, and their colour is a pale yellowish-grey, with numerous pale reddish-brown spots.—The young, until the autumnal moult, differ greatly from their parents in plumage ; and are of an oil-green, tinged with yellowish-brown, each feather being spotted with pale reddish, or chesnut brown ; and having the breast untinged with red. When the chillness of the autumnal season proclaims approaching winter, the greater part of the Redbreasts leave the woods, and seek for shelter, and an easier supply of food, near our habitations, where they soon acquire that degree of familiarity which has obtained for them the particular protection of mankind.

The natural food of this bird consists of worms (which it beats to death, and cleanses before eating), insects and their larvæ ; but in winter, and when this more congenial food cannot be procured, it will subsist on crumbs of bread, or any other trifling offal, which it either finds, or is supplied with, in the premises to which it has attached itself. It is of very bold disposition, and will not admit of the approach of any other small bird to the vicinity of its nest, or to visit, without attack, the precincts it has selected for its walk through the winter.

In their habits, Redbreasts are solitary birds, never associating in flocks ; their partial migrations even being performed singly. They are widely diffused, being found through the greater part of Europe ; and in France and Holland are very abundant.

The general familiarity and confiding manners of this species have procured for it an appellation of endearment in most of the countries that it inhabits ; thus, in Sweden it is called *Tomi Liden* ; in Norway *Peter Ronsmad* ; *Thomas Gierdet* in Germany ; and with us *Robin Redbreast*.

During the autumnal months, and in the beginning of winter, the song of the Redbreast is often heard ; but such effusions seem to be the attempts of the younger birds, probably induced by the completion of the adult plumage, as

Food.

the strain does not bear the strong impassioned character that distinguishes it during the spring, and the commencement of summer.

PLATE 46. Fig. 2. The male bird, of the natural size.

Head and upper parts of the body deep oil-green, tinged with yellowish-brown. Forehead, cheeks, throat, and breast gallstone-yellow, inclining to reddish-orange, and margined round with smoke-grey. Belly white. Flanks and thighs oil-green tinged with brown. Middle wing-coverts tipped with pale orange. Quills greenish-grey. Irides black. Legs and toes yellowish-brown.

General
descrip.
tion.

Male Bird.

The breast of the female is not so bright in colour as that of the male ; and the plumage of the young birds has been already noticed.

GENUS PHœNICURA, SWAINSON. REDSTART.

GENERIC CHARACTERS.

BILL rather slender, and somewhat widened at the base ; compressed towards the tip, which is deflected and emarginated. Tomia of the mandibles, before the nostrils, bending inwards. Gape slightly bearded. Nostrils basal, oval, lateral, pierced in a membrane, and partly concealed by the feathers of the forehead. Wings rather long, with the first quill very short ; the second inferior to the third ; the fourth the longest of all. Tail of mean length, slightly rounded or square ; coloured more or less with reddish-brown. Legs having the tarsi longer than the middle toe. Toes slender, but formed nearly upon the same plan as those of genus *Erythaca*.

The Redstarts form a prominent and well marked group in the subfamily *Saxicolina*, and are distinguished from the other members by the rich reddish-brown that prevails to a greater or less degree in their plumage, particularly in the

tail, where this colour is disposed much in the same way, and is analogous to the white that marks the birds belonging to the genus *Saxicola*. The present group has been augmented by the recent discovery of two or three other species * in the Himalayan range of mountains, and now numbers eight or ten distinct forms. In manners, they bear a great resemblance to the Stone-Chats, though their habits are rather more sylvan, and they obtain part of their food by searching the interstices of the decaying bark of trees, holes of walls, &c. The genus is confined to the ancient world. From the observations I have made upon the habits of our own species, it is probable that the scansorial form of the subfamily *Saxicolina* will belong to this genus.

REDSTART.

PHœNICURA RUTICILLA, Swains.

PLATE XLVI. FIG. 3.

Sylvia phœnicurus, Lath. Ind. Ornith. v. 2. p. 511. sp. 15.

Motacilla Phœnicurus, l. p. 335. 34.—*Gmel. Syst.* 2. p. 987. sp. 34.

Rutacilla, Rau Syn. p. 78. A. 5.—*Will.* p. 159.—*Briss.* 3. p. 403. 15.

Le Rossignol de Murailles, Buff. Ois. v. 5. p. 170. t. 6. f. 2.—*Id. Pl. Enl.* 351. f. 1. and 2.

Bec-fin de Murailles, Temm. Man d'Ornith. v. 1. p. 220.

Schwarzkeliger Sanger, Meyer, Tasschenb. Deut. v. 1. p. 244.—*Bechst.* Naturg. Deut. v. 3. p. 607.—*Frisch.* t. 19. f. 1. male, t. 20. f. 1. A. and fig. 2. A. female, fig. 2. B. young male.

Geckragde Roodstaart, Sep. Nedrel. Vög. v. 4. p. 361.

Redstart, Br. Zool. 1. No. 146.—Arct. Zool. 2. p. 416. B.—*Will.* (Ang.) p. 218.—*Lath. Syn.* 4. p. 421. 11.—*Lewin's Br. Birds*, 3. t. 108.—*Albin.* 1. t. 50.—*Pult. Cat.* Dorset. p. 8.—*Mont. Ornith. Dict.*—*Id. Supp.*—*Don. Br. Birds*, 4. t. 82.—*Bewick's Br. Birds*, v. 1. f. 208.

PROVINCIAL—Redtail.

THE Redstart is found in most of the eastern, midland, Periodical and northern parts of the kingdom, but, according to MON-

visitant.

*In GOULD's "Century of Himalayan Birds," three species of Redstarts are beautifully figured. Two of these seem true to the type; but the third (*Phœnicura Rubeculoides*) appears, from its form and plumage, to have a nearer affinity to the genus *Erythaca* or *Sialia* than to *Phœnicura*.

TAGU, is very rare in some of the western counties. It arrives early in April, and departs, on its autumnal migration, towards the latter part of September. During its residence with us, will generally be found in the vicinity of old walls, in the crevices of which, as well as in the holes of decayed trees, it prepares its nest. This is formed of moss, with a lining of hair and feathers, and contains from five to eight Nest, &c. eggs, of a fine greenish-blue, lighter in shade than those of the *Hedge Accentor*. It is an active and restless bird, and when perched, shakes its tail with a rapid and singularly tremulous motion.—From its song, (which though short in stave, is of sweet and pleasant notes), together with its light elegant shape, and varied plumage, it may be considered one of the most interesting of our summer visitants. For some years past, the Redstart has become of comparatively rare occurrence in Northumberland, but without any apparent cause for this change in the line of its migration; unless it may be attributed to greater attention having been latterly bestowed upon the management of woods, and a consequent deficiency of old and decaying trees, for the purpose of nidification, and stone-walls having, during the same period, so much given way to the use of hedges for enclosure. Like most of the members of this genus, its food consists of winged and other insects, with berries and the smaller fruits.

This species is common throughout Europe, and migrates pretty far to the northward. In Holland it is very abundant.

PLATE 46. Fig. 3. The male bird. Natural size.

General description.

Base of the bill, space between the bill and eyes, cheeks, throat, and upper part of the under side of the neck, black. Forehead white. Head, hind part of the neck and back deep bluish-grey. Breast, rump, and flank reddish-orange; tail the same, except the two middle feathers, which are clove-brown. Middle of the lower part of the belly, and the vent, white; under tail-coverts

reddish-orange. Quills greyish-black, the second and sixth feathers being of equal length. Legs and toes black.

Fig. 3. The Female. Natural size.

Upper parts yellowish-brown, with a shade of grey upon the head and back. Breast and flanks pale reddish-orange. Throat reddish-white. Rump and tail reddish-orange, except the two middle feathers; but which are not so bright as in the male bird.

The young males of the year are without the white forehead, and the black upon the throat is intermixed with white feathers, as well as the orange upon the breast. The upper parts are pale reddish-brown, tinged with grey.

TITHYS REDSTART.

PHœNICURA TITHYS, Jard. and Selby.

PLATE D. FIG. 12.

Phœnicura Tithys, Jardine and Selby's Illustrations of Ornithology, pl. 86.
Fig. 1. and 2. Male and Fem.

Sylvia Tithys, Lath. Ind. Orn. 2. 512. sp. 16.

Motacilla Tithys, Linn. Syst. 1. 335. 34. B.—*Gmel. Syst.* 1. 987.

Sylvia Gibraltariensis, Lath. Ind. Orn. 2. 513. sp. 17.

Becfin rouge-queue, Temm. Man. d'Orn. 2. 218.

Tithys Redstart, Illust. of Ornith. pl. 86. fig. 1. and 2.

THE discovery of this species, since the publication of the first edition of the present volume, in the southern part of England, by Mr J. GOULD, enables me to add it to the list of our Fauna as an occasional visitant. In its general appearance it bears a great resemblance to the Common Redstart, but is without the reddish-brown upon the under parts of the body, as well as the distinct white bar on the forehead. Its manners are stated by those who have had an op-

Occasional
visitant.

portunity of observing them to be very like those of our own species, and it is also generally found frequenting similar localities in the countries it inhabits, such as old park walls, out-buildings, and the ruins of ancient castles. Upon the Continent it is a common species, and has a wide distribution, being found in the mountainous districts of Italy, in Switzerland, Germany, and other northern countries; and as *Sylvia Gibraltariensis* of LATHAM appears to refer to this species, we may extend its range to Spain, and probably to the opposite parts of the African continent. In France it is comparatively rare, and, according to TEMMINCK, is very seldom observed in Holland.

Nest, &c. It breeds in the clefts of rocks, holes of walls, &c., and is said to lay five or six eggs, of a pure and lustrous white.

Food. Its food consists of insects and their larvæ, worms, and occasionally the smaller fruits and their berries.

PLATE D. Fig. 1. Represents a male of this species.

General
descrip-
tion.
Male Bird.

Base of the bill, region of the eyes, sides of the neck, throat, and breast, black; the feathers of the latter being margined with grey. Middle of the abdomen greyish-white. Flanks and sides blackish-grey. Head, nape of the neck, back, and wing-coverts, bluish-grey. Quills blackish-grey. Secondaries and tertials margined with greyish-white. Upper and under tail-coverts brownish-orange. Tail having the two middle feathers dark-brown, edged with orange; the rest bright brownish-orange red. Legs black.

Female.

Fig. 2. In the female the whole of the body is of an uniform yellowish-grey colour; the quills and secondaries being of a darker shade, margined with pale yellowish-brown. Under tail-coverts pale orange. Tail similar to that of the male bird, but scarcely so bright in tint.

BLUE-THROATED REDSTART.

PHœNICURA SUECICA.

PLATE C. FIG. 2. 3.

Sylvia suecica, Lath. Ind. Orn. 2. 521. sp. 43.*Motacilla suecica*, Linn. Syst. 1. 336. 37.—*Gmel.* Syst. 1. 989.*Currula suecica*, Selby in Trans. of Nat. Hist. Soc. of Northumb. &c. Cat. of Birds.*Cyanecula*, Briss. 3. 413. 19. Male.La Gorge bleue, Buff. Ois. 5. 206. t. 12.—*Id.* Pl. Enl. 610. fig. 1.

Beccin Gorge-bleue, Temm. Man. d'Orn. 2. 216.

Blue-throated Warbler, Penn. Arct. Zool. 2. p. 417. E.—*Lath.* Syn. 4. p. 444. 30.

FROM a specimen of this beautiful Redstart having been killed in an undoubted wild state upon a common near to + Newcastle-upon-Tyne, I feel authorized in adding it (like Occasional the preceding species) to the list of British Birds, in the light of an occasional visitant. Not having been able to investigate with the necessary strictness its direct affinities, and the station it holds among the *Sylviadæ*, at the time my catalogue of birds hitherto met with in the northern counties (published in the first volume of the Transactions of the Natural History Society of Northumberland, Durham, and Newcastle-upon-Tyne,) was sent to press, I had there given it as a species of *Currula*, and consequently as belonging to the Subfamily *Philomelina*. Subsequent opportunities of examination, and a strict analysis of its characters, indicate a very close alliance with *Phœnicura*, of which genus indeed I have no hesitation in considering it a species. The information to be obtained from the writings of other authors as to its habits and general economy, is unfortunately very meagre and unsatisfactory. TEMMINCK says that it resides in the purlieus of forests, and that it breeds in the holes of decayed trees, and similar situations, in this latter respect resembling the other Redstarts. The eggs are said to be of a Nest, &c.

+ An individual was shot at the Belvoir Forest.
October 1842.

Food. greenish-blue colour, and six in number. Its food consists of worms, insects, and their larvæ.

PLATE C. Fig. 2. Represents the male bird.

- General description.
Male bird. Crown of the head umber-brown. Feathers at the base of the bill, and the eye streak, yellowish-white. Upper plumage hair-brown, tinged with grey ; with the margins of the wing-coverts and scapulars paler. Chin, throat, and upper part of the breast, rich azure-blue, with a central spot of silky-white ; the lower margin of the blue being bounded by a narrow gorget of black, which is succeeded by another of reddish-brown. Abdomen and under tail-coverts dirty-white, or inclining to smoke-grey. Tail with the two middle feathers hair-brown ; the rest having the basal half orange-brown. Bill brown, paler towards the base ; in form nearly the same as that of *Phœnicura Tithys*. Tarsi upwards of an inch in length; toes slender; claws but slightly curved.
- Female. Fig. 3. The female has the feathers of the head finely margined with grey ; and the upper part of her plumage lighter in tint than the male. Chin pale azure-blue, mixed with white. Upper part of the breast, and the streak on each side of the neck, black, intermixed with azure-blue, and surrounding a large patch of white. Abdomen and tail as in the male.

SUBFAMILY PHILOMELINA.

IN addition to the Nightingales, or typical genus *Philomela* (SWAINS.), this group contains the nearly allied genus *Curruca* (BECHST.), of which our sweet songster the Black-cap may be taken as an example. I have also ventured to include in it all the aquatic Warblers, answering to the “*Beefins Riverains*” of TEMMINCK, and to which I have given the generic appellation of *Salicaria*. To this

group belong the *Sylvia Turdoides* of MEYER (*Turdus arundinaceus* of LATHAM), a large species, and which would appear, from the strength of its legs and feet, to lead back to the *Crateropodinae* of the Subfamily *Merulida*. The members of this genus also seem closely allied to genus *Synallaxis* (VIEILL.), which belongs to the present subfamily. By Mr SWAINSON the Redstarts (genus *Phænicura*) are arranged in *Philomelina*; but I have left them in the subfamily *Saxicolina*, to which I consider they have a still nearer affinity, constituting, in fact, from a participation of the characters of each group, one of those immediate connecting links that may, without violence, be attached to either.

The typical genera of the present subfamily are famed for richness and power of voice. In them the bill acquires a medium degree of strength, and is not so suddenly compressed in advance of the nostrils. In the aquatic group it is more slender and subulate; the proportions of the wings are also different, and the tail is considerably wedge-shaped or rounded. In *Philomelina*, the feet are formed for perching, the claws being curved and sharp; and the sole (or under surface of the hind toe) much enlarged, giving additional firmness to the grasp. These birds feed upon insects and larvae, which they seek for amid the leaves and light sprays, rarely attempting to capture them upon wing. Many also are partial to the smaller soft fruits and berries.

GENUS SALICARIA, MIHI. AQUATIC WARBLER.

GENERIC CHARACTERS.

Bill strait, subulate, expanded at the base, with a distinct culmen, compressed towards the tip; which latter is slightly deflected and emarginated. Tomia strait; those of the under mandible being gently inflected. Nostrils basal, lateral, oval, and exposed. Forehead narrowed and depressed. Wings

rather short ; the first quill nearly abortive ; the second just shorter than the third, which is the longest of all. Tail rather long, and rounded. Legs having the tarsi longer than the middle toe. Feet rather large, and stout ; the hind toe large, and strong. Claws moderately curved, long, and very sharp ; that of the hind toe being double in size and strength to any of the others.

The birds of this genus are the inhabitants of reedy marshes, and of low damp underwood, where they live concealed, seldom appearing upon the upper or exposed branches, but confining themselves to the closest part of the bushes or herbage. Through such entanglements, the form of their feet, long sharp claws, and narrow depressed foreheads, enable them to pass with astonishing dexterity and quickness, and specimens, on this account, are not easily obtained, and only by long and silent watching. Their flight is low, and merely from bush to bush, except at the periods of migration. Some species possess considerable compass of voice, and a great variety of notes, though many of them are harsh ; others only a constant monotonous cry, as exemplified in the Grasshopper Warbler (*Salicaria Locustella*). This genus, through some of its members, seems to claim affinity with genus *Prinea*, as well as with *Synallaxis*, and others. Food aquatic and other insects, and larvæ.

GRASSHOPPER-WARBLER.

SALICARIA LOCUSTELLA, Mihi.

PLATE XLV. ** FIG. 1.

Sylvia Locustella, *Lath.* Ind. Ornith. v. 2. p. 515. sp. 25.Locustella avicula, *Raii* Syn. p. 70. A. 7.—*Will.* p. 151.L'Alouette locustelle, *Buff.* Ois. v. 5. p. 42.—*Id.* Pl. Enl. v. 581. f. 3. under the title of Fauvette tachetée.Beccin locustelle, *Temm.* Man. d'Ornith. v. 1. p. 184.Fleuschen-sanger, *Meyer*, Tasschenb. Deut. v. 1. p. 230.—*Bechst.* Naturg. Deut. v. 3. p. 562. sp. 23.Grasshopper Warbler, Br. Zool. I. No. 156.—Arct. Zool. 2. p. 419.—*Lath.* Syn. 4. p. 429. t. 20.—*Id.* Supp. 2. p. 240.—*White's Hist. Selb.* p. 45.—*Lewin's Br. Birdr.* 3. t. 98.—*Mont.* Ornith. Dict.—*Id.* Supp.—*Bewick's Supp.* to Br. Birds.Titlark that sings like a grasshopper, *Will.* (Ang.) p. 207.

THE present species was long subjected to an erroneous impression, by being considered as of the *Lark* genus, which mal-arrangement with respect to it could only have arisen from the difficulty of procuring specimens. It would otherwise be a subject of wonder, how any one, conversant with this department of zoology, could confound species so dissimilar in form and habits; and, under examination, the essential characters widely differ. It is a migratory bird, and is seldom heard, in the northern parts of the kingdom, before the beginning of May; but in the southern (or rather southwestern counties, according to MONTAGU) as early as the second or third week in April.

It is far from being abundant, and is very partially distributed; the above author fixing its limits of migration to the counties before mentioned, and to Ireland; but I have known it, for some years past, as a visitant to several parts of Northumberland, where it haunts low and damp situations, overgrown with furze, bramble, and underwood. It is remarkably shy and timid, and is very seldom seen upon wing, generally remaining shrouded in the middle of the thickest furze, or other entanglement, which it threads with

Periodical visitant.

the rapidity of a mouse. In order to obtain specimens, I have been obliged to watch for a considerable time before a distinct view of the individual, and an opportunity to fire at it, could be obtained ; although, during that time, the frequent repetition of its remarkable note told its immediate proximity. This note consists of a sort of sibilant ringing cry sometimes repeated for many minutes without intermission, and resembles so exactly the note of the Mole-cricket (*Grylla Talpa*), as to render it a difficult task to distinguish them ; and probably, as MONTAGU suggests, may answer the double purpose of a decoy-note to these insects, and a song of love and invitation to its feathered mate. In the utterance of this note, it appears to possess a kind of ventriloquism, as it can cause the sound, at one moment, to proceed from the immediate neighbourhood of the listener, and at the next, as if removed to some distance, and this without any actual change of place in the operator *. As it builds in the closest bramble or furze bushes, the nest is very seldom found, and it remained undescribed till the publication of the Nest, &c. Ornithological Dictionary. It is composed of moss, and the dried stems of the ladies' bed-straw (*Galium*), and bears a great resemblance to that of the Pettychaps, or the White-Throat, though it is thicker, and more compact in texture. The eggs are four or five in number, of a pinkish-grey, with numerous specks of a deeper tint. The young, when disturbed, immediately quit the nest, although but half fledged, trusting, doubtless, to their instinctive power of concealment.

This bird has been supposed to leave England early in the autumn, as its cricket-like cry is seldom heard later than July or August ; but as this note is presumed to be restricted to a determinate period, viz. the season of pairing, it may perhaps remain as late as its congeners, but unnoticed, from its shy nature, and retired habits.

* The same effect must have been frequently observed as attendant on the Corn-crake (*Gallinula Crex, Lath.*), a bird also very difficult to raise on wing.

PLATE 45 **. Fig. 1. Natural size.

Upper parts of the body deep oil-green ; the centres of the feathers, except upon the rump, dusky, or yellowish-brown. Throat white, bounded by a circle of small oval brown spots. Breast and flanks pale oil-green, passing into greenish-white on the middle of the belly. Under tail-coverts greyish-white, the shafts of the feathers being black. Quills dusky, margined with pale oil-green ; tail the same, and very wedge-shaped. Legs and feet pale yellowish-brown. Claws hooked and strong.

General description.

The female is not distinguishable from the male bird in the tints and formation of her plumage.

SEDGE-WARBLER.

SALICARIA PHRAGMITIS, Mihi.

PLATE XLV **. FIG. 2.

Sylvia Phragmitis, Bechst. Naturg. Deut. v. 3. p. 633—Id. Tasschenb. Deut. p. 186. sp. 20.

Sylvia Salicaria, Lath. Ind. Ornith. v. 2. p. 516. sp. 26.

Curruga arundinacea, Briss. 3. p. 378. 5.

Avis consimilis stapharolae, Raii Syn. p. 81. 6.—Will. p. 153.

Beechin Phragmite, Temm. Man. d'Ornith. v. 1. p. 189.

Schilfsanger, Meyer, Tasschenb. Deut. v. 1. p. 234.

Enkel Karakiet, Sepp. Nederl. Vög. v. 2. t. 53. p. 98.

Sedge Warbler, Arct. Zool. 2. No. 419.—White's Hist. Selb. p. 67. 71. 74.

Lath. Syn. 4. p. 430. 21.—Id. Supp. p. 180.—Mont. Ornith. Dict.—Id.

Supp.—Lewin's Br. Birds, 3. t. 105.—Walc. Syn. 2. t. 236.—Pult. Cat.

Dorset, p. 9.—Don, Br. Birds, 2. t. 48.

Willow Lark or Sedge Bird, Br. Zool. 1. No. 155.

Reed Fauvette, Bewick's Br. Birds, 1. t. 223.

PROVINCIAL—Sedge Wren, Lesser Reed-Sparrow, Blethering Tam.

IN size and form the Sedge-Warbler bears a great resemblance to the preceding species, but may always be distinguished from it by the distinct white streak that passes above the eyes.

Periodical visitant.

It arrives about the same period, and resorts to marshes,

banks of rivers, and lakes, or wherever reeds and other tall aquatic plants are sufficiently abundant to grant it the necessary shelter. In such situations, it may be heard during the whole day, and even through the greater part of the night, pouring forth its interrupted, though unwearied song.

This consists of a great variety of notes, amongst which may be observed close imitations of the Swallow, Lark, Sparrow, and Linnet, mingled with other more guttural notes, and the whole delivered confusedly, but with great rapidity. In general it remains concealed from view, in the closest reeds or bushes ; but will sometimes sing perched on the very top of a small branch, or warble in its flight (which on such occasions is very peculiar) from one station to another at short distances. It has been remarked of this bird, that, when silent, it immediately commences singing on being slightly disturbed, or being roused by a stone cast into the bush where it sits concealed. It has been frequently confounded with the *Reed-Wren*, which possesses similarity of form and habits ; but, in this case also, the above-mentioned eye-streak proves a sufficient token of distinction. In addition to which, it is an abundant species, and very widely distributed ; while the Reed-Wren appears limited to a few districts in the southern part of the kingdom.

Nest, &c. The Sedge-warbler builds amongst the aquatic plants it chiefly frequents, often suspending its nest between three or four of the closest adjoining reed-stems. I have also found its nest in willow and low birchen bushes. It is composed of a little moss, intermixed with coarse grasses, lined with hair and fine dry grass. The eggs are five or six in number, of a pale wood-brown, speckled with darker shades of the same colour.

Food. The food of this species consists of various aquatic flies, worms, and small slugs.

This bird is among the latest of the *Sylviadæ* in taking its final departure in autumn, and I have frequently observed it as far as the 10th or 15th of October. According to

TEMMINCK, it is very abundant throughout Holland, and is found also in Germany and France. In Great Britain I have traced it to the northern parts of Scotland.

PLATE 45 **. Fig. 2. Natural size.

Form typical. Bill slender, depressed, and moderately widened at the base; gape having three or four strong hairs or bristles projecting rather forwards. Crown of the head deep yellowish-brown, spotted with dark liver-brown. Back and wing-coverts oil-green, the centres of the feathers being darker. Rump and upper tail-coverts pale yellowish-brown. Above the eye is a broad and distinct yellowish-white streak. Chin and throat white; the rest of the under parts yellowish-white, inclining to pale yellowish-brown upon the breast. Wings blackish-brown, margined with pale yellowish-brown. Tail wedge-shaped, hair-brown, margined paler. Legs and toes blackish-brown. Claws long, moderately curved, and very sharp.

The female is similar in plumage to the male bird.

REED-WREN.

SALICARIA ARUNDINCEA, Mihi.

PLATE XLV **. FIG. 3.

- Sylvia arundinacea, *Lath.* Ind. Ornith. v. 2. p. 510. sp. 12.
Motacilla arundinacea, Gmel. Syst. 1. p. 992. sp. 167.
Currucar arundinacea, Briss. Orn. v. 5. p. 378. 5.
Passer arundinaceus, minor, Raii Syn. p. 47.—*Will.* p. 97.
Fauvette de Roseaux, Buff. Ois. v. 5. p. 142.
Becfin de Roseaux, ou Efarvette, Temm. Man. d'Ornith. v. 1. p. 191.
Rhorsanger, Meyer, Tasschenb. v. 1. 235.—*Id.* Vög. Deut. 2. Heft. p. 23.
Het Karrakietje, Sepp. Nederl. Vög. v. 2. p. 101.
Lesser Reed-Sparrow, Will. (Ang.) p. 144.
Reed-Wren, Lath. Syn. Supp. p. 184.—*Mont.* Ornith. Dict.—*Lewin's Br. Birds*, 3. t. 114.

ON reference to notes made during excursions in different Periodical parts of England, I do not find that I have ever observed ^{visitant.}

the Reed-Wren to the north of Nottinghamshire. It is common in several of the southern and eastern counties, but is confined to such localities as afford proper covert, viz. wet ditches and fens, the margins of rivers and pools, that are overgrown by reeds and tall aquatic plants*. In these situations it passes the period of its residence with us, extending from the latter part of April to the beginning of September. Its habits are very similar to those of the Sedge-Warbler, and it is equally desirous of concealment from observation ; but the uniform tinge of its superior plumage, and the want of the well-defined eye-streak, are always sufficient distinction between the two species. The bill also is longer, and considerably dilated at the base.

Nest, &c. It forms its nest of the seed-tops of reeds and long grass, lined with the finer parts of the first-named materials, and suspends it between a few adjoining stems. It is made so deep as entirely to conceal the bird when sitting, an instance of provident instinct to prevent the eggs from being thrown out when the supporting reeds are bowed by the force of the wind.

MONTAGU observes, that he has seen this bird sitting on her nest, when the wind blew hard, and that every gust forced it almost to the surface of the water. It lays four or five eggs, of a greenish-white, blotched and spotted with brown and oil-green.

Food. Aquatic flies and their larvæ form the food of this species.

In Holland it is very abundant. It is also found in particular districts of France and Germany ; but is rare in the south of Europe.

PLATE 45 **. Fig. 3. Natural size.

General description. Bill rather long, strait, and dilated at the base ; pale-brown.

Gape having two or three strong bristles on each side.

* In Kent, I have met with it plentifully on a small reedy pond at *The Mote*, near Igtham. Its song is varied and pleasing, with fewer of the harsh notes that prevail in that of the Sedge-Warbler, and is delivered in the same hurried manner.

From the corners of the mouth to the eyes runs a pale streak. Eyelids pale yellowish-white. The whole of the upper plumage oil-green, tinged with brown; the quills being margined paler. Throat, breast, and belly yellowish-white; deeper in colour upon the breast and flanks. Tail cuneated, and rather long. Legs long, dusky-brown; the hind toe strong, and armed with a long hooked claw.

GENUS PHILOMELA, *SWAINS.* NIGHTINGALE.

GENERIC CHARACTERS.

BILL of mean strength, strait; culmen rounded; the tip of the upper mandible slightly deflected and emarginated; lower mandible as strong as the upper. Gape smooth. Nostribs basal, lateral, round, pierc'd in a large membrane. Wings of mean length; the first quill very short; the second of the same length as the fifth; the third and fourth nearly equal to each other, and the longest of all. Tail slightly rounded. Legs having the tarsi long; feet adapted for perching, and also for hopping upon the ground; claws moderately curved, and very sharp.

The birds of this the typical genus of the present subfamily, are famed for their vocal powers, of which our Nightingale is an eminent example. They differ from the nearly allied genus *Curruca* (BECHST.) in having the bill wider near the gape, and less compressed towards the tip. Their legs are also longer, and the feet not formed so entirely for perching.

NIGHTINGALE.

PHILOMELA LUSCINIA, Swains.

PLATE XVI. FIG. 1.

Sylvia Luscinia, *Lath.* Ind. Ornith. v. 2. p. 506. sp. 1.
 Motacilla Luscinia, *Linn.* Syst. 1. p. 328.—*Gmel.* Syst. 1. p. 950. sp. 1.—*Raii*
 Syn. p. 78. A. 2.—*Will.* p. 161. t. 41.—*Briss.* 3. p. 397. 13.
Le Rossignol, Buff. Ois. v. 5. p. 81. t. 6. f. 1.—*Id. Pl. Enl.* 615.
Bec-fin Rossignol, Temm. Man. d'Ornith. v. 1. p. 195.
Nactigall, Meyer, Tasschemb. Deut. v. 10. 221.—*Frisch, Vög.* t. 21. f. 1. A.
Nightingale, Br. Zool. 1. No. 154.—*Arct. Zool.* 2. p. 416. A.—*Lewin's Br.*
 Birds, 3. t. 99.—*Lath. Syn.* 4. p. 408. 1.—*Id. Supp.* p. 180.—*Mont.*
Ornith. Dict.—*Id. Sup.*—*Walc. Syn.* 2. t. 229.—*Pult. Cat. Dorset.* p. 8.
 —*Bewick's Br. Birds,* 1. p. t.—*Don. Br. Birds,* t. 108.

Periodical
visitant.

THIS bird, so justly celebrated for the sweetness and extensive power of its song, arrives in Britain towards the end of April, or in the beginning of May. From the observations of professed bird-catchers, it appears that the males constantly precede the females by an interval of ten days or a fortnight *, as none but the former are taken on their first appearance in the country. From this circumstance arose the supposition, that the number of male birds greatly exceeded that of the other sex. As soon as the Nightingale has reached the limit of his migration, he selects some favourite spot for the accomplishment of those duties pointed out by nature; and having there settled, commences his song of love and invitation, which is unremittingly continued till a mate is attracted by its melodious notes. As soon as this takes place, his unwearied efforts cease, and the song is only uttered at intervals, during the tedious process of incubation.—The haunts of this bird, during its abode in our island, are confined to particular districts; it is plentiful in the southern and

* I have observed this to be also the case with respect to most of the summer visitants, and have invariably found it in the Willow-Wren (*Sylvia trochilus*) and Wood-Wren (*Sylvia sibilatrix*).

eastern counties, but only extends to the west as far as Devonshire. Its northern boundary appears to be the neighbourhood of Doncaster in Yorkshire, as scarcely any well-authenticated instances are produced of its appearance beyond that town. Some peculiarity as to the food most congenial to it, or some hitherto undiscovered circumstance in its economy, must, without doubt, be the cause of the partial distribution, not only of this, but of other species. It cannot, in the present bird, be attributed entirely to climate, as Nightingales are found in countries situated farther to the north than England; being common in Sweden, and in the northern parts of Germany.

It is of very shy disposition, frequenting woods rank with undergrowth, close thickets, thorn-brakes and hedges, and is seldom seen; the place of its retreat being only discovered from its song.—In the combined qualities of variety, richness, and power, this song is unrivalled, and its effect is still further increased by the chosen hour of its utterance, during the silence of a calm summer's night.—Its nest is formed upon Nest, &c. the ground, of withered oak-leaves, and lined with dry grass. It lays from four to six eggs, of a plain yellowish-brown.—The food of the Nightingale consists chiefly of insects and Food. their larvæ; to which may be added berries and fruit.

From the observations of MONTAGU it appears, that the young birds are principally fed with small green caterpillars, probably the larvæ of some moth; but perhaps that of a *ten-thredo*, peculiar to certain localities. After rearing its progeny, and recruiting for a short time its strength, after the performance of its parental duties, on the first approach of autumn, it departs from our shores for a warmer and more congenial climates. Egypt and Syria appear to be its chief retreats during our winter, at which time it has been remarked, in the first of these countries, to be plentiful in the thickets of the Delta, but has never been known to sing, uttering only the common alarm-note, so frequently heard in those districts of England where it abounds.

PLATE 46. Fig. 1. Natural size. Form typical.

General description.

Upper parts deep yellowish-brown. Rump and tail reddish-brown. Throat and middle of the belly greyish-white. Sides of the neck, breast, and flanks grey. Legs and toes pale yellowish-brown.

The female is similar in plumage to the male.

GENUS CURRUCA, BECHST. WARBLER.

GENERIC CHARACTERS.

BILL rather stout, compressed ; culmen narrow, distinct, and gently deflected towards the tip, which is emarginated. Tomia, towards the middle of the under mandible, having a slight inflection. Gape nearly smooth. Nostrils basal, lateral, oval, and exposed. Wings with the first quill very short; the second inferior to the fifth; the third and fourth generally the longest. Legs having the tarsi longer than the middle toe ; toes short, and formed for perching ; hind toe strong ; the sole dilated and broad. Claws much curved ; grooved on the sides, and very sharp ; that upon the hind toe strongest, and of greatest length.

The genus *Curruca*, established by BECHSTEIN, contains several species, amongst which our *Black-Cap* and *Greater Pettychaps* furnish familiar examples. They differ from the Nightingales in having the bill more compressed, with a sharper culmen or ridge ; the legs shorter, and the feet formed more exclusively for perching. In general they possess sweet and varied notes ; some species, indeed, almost emulating in their warblings the richness and power of the Nightingale. They feed upon insects and larvæ, and are very partial to the smaller soft fruits and berries.

BLACK-CAP WARBLER.

CURRUCA ATRICAPILLA, Bechst.

PLATE XLVI. FIG. 2. and 3.

Sylvia atricapilla, *Lath.* Ind. Ornith. v. 2. p. 508. sp. 6.Motacilla atricapilla, *Linn.* Syst. 1. p. 332. 18.—Fauna Suec. No. 256.—

Gmel. Syst. 1. p. 970.

Curruca atricapilla, *Briss.* 3. p. 580. 6.Atricapilla, seu Ficedula, Aldrov. *Raii* Syn. p. 79. A. 8.—*Will.* p. 162.Beccin à tête noir, *Temm.* Man. d'Ornith. v. 1. 201.La Fauvette à tête noir, *Buff.* Ois. v. 5. p. 125. t. 8. f. 1.—*Id.* Pl. Enl. 580. f. 1. and 2. male and female.Schwarzköpfige Grasmücke, *Meyer*, Tasschenb. Deut. v. 1. 223.—*Frisch.* t. 23. f. 1. A. and B.Black-cap, Br. Zool. 1. p. 148.—Arct. Zool. 2. p. 418. E.—*Will.* (Ang.) p. 226.—*Lath.* Syn. 4. p. 415. 5.—*Lewin's* Br. Birds, 3. t. 116.—*Pult.* Cat. Dorset. p. 9.—*Mont.* Ornith. Dict.—*Bewick's* Br. Birds, v. 1. p. t. 217.

THIS species appears with us about the latter part of April, Periodical visitant. or, in backward seasons, not before the beginning of May; it is more generally dispersed than the preceding one, and is found not only throughout England, but in Scotland, wherever from situation it can obtain a suitable retreat. This is usually in wood or thicket; but it also frequents gardens and orchards. It is of a shy nature, like most of the tribe.—It possesses much melody of song, though unequal in extent or power to that of the Nightingale. During its song, it is generally perched upon the summit of a tree, from whence it pours forth, at intervals, its clear and well defined notes.—It builds in low bushes and brambles, or amongst Nest, &c. nettles; and the nest, which is loosely put together, is formed of the dry stems of the cleavers (*Galium aparine*), frequently lined with a few hairs, and fine fibres of root.

The eggs are of a reddish-brown, with spots of a darker shade, intermixed with others of an ash-grey colour; and are four or five in number. The young of this, as well as of many other species, are very impatient of observation, and, when handled, or otherwise disturbed, immediately quit the

Food. nest, although but half fledged at the time.—The food of the Black-Cap consists of insects, which it searches for among the leaves and light sprays, being seldom or never seen upon the ground. It also greedily devours the smaller sorts of fruit, particularly raspberries and red currants. On its first arrival it feeds upon the berries of the ivy, but quits this diet as soon as the summer's warmth has called a sufficiency of the insect tribe into existence.

The species is widely dispersed through the northern and eastern parts of Europe, extending to as high a latitude as Lapland. It is rare beyond the Apennine and Pyrenean Mountains. In Madeira it is common, and permanently resident. Another, nearly allied to it (indeed considered by some as only a variety) is also not uncommon on that island ; and which last is figured and described as *Curraca Heincken* in the “ Illustrations of Ornithology” by JARDINE and SELBY.

PLATE 46. Fig. 2. A male bird of the natural size.

General descrip-
tion.

Male bird.

Forehead, crown, and occiput, black. Neck and breast grey. Upper parts of the body grey, tinged with oil-green. Belly and vent pale ash-grey. Legs and feet bluish-grey. Bill and irides brown.

Female. Fig. 3. The female, natural size.

Crown of the head umber-brown. General tints of the plumage darker, and more inclining to oil-green than in the male bird. Exceeds the male in size.

The young, upon quitting the nest, resemble the female in plumage.

GREATER PETTYCHAPS.

CURRUCA HORTENSIS, Bechst.

PLATE XLVI. FIG. 4.

Sylvia hortensis, Bechst. Naturg. Deut. v. 3. p. 524. sp. 4.—*Id.* Tasschenb. Deut. p. 169.—*Lath.* Ind. Ornith. v. 2. p. 509. sp. 3.
La Petit Fauvette, Buff. Pl. Enl. 509. sp. 3.
Becfin Favette, Temm. Man. d'Ornith. v. 1. p. 206.
Graue-Grasmücke, Meyer, Tasschenb. Deut. v. 1. p. 224.
Braemsluiper, Sepp. Nederl. Vög. v. 2. t. p. 139.
Greater Pettychaps, Mont. Ornith. Dict. and Supp.
Fauvette Pettychaps, Bewick's Br. Birds, 1. t. 218.

THE Pettychaps appears to have been first described as a Periodical visitant. British species by DR LATHAM, who received his specimen from Lancashire. Since that period (a greater degree of attention having been bestowed upon this department of Natural History) it has been found in most parts of England, which it periodically visits; arriving with the other species of Warblers, in April and May, and departing early in September. MONTAGU informs us that he traced it throughout the greater part of England; but he fixes the *Tyne* as its northernmost limit, in which boundary of its migration he is certainly mistaken, as I have often seen it on the north of the *River Tweed*.*

The song of this species, although inferior in extent of scale, almost equals that of the Nightingale in sweetness; some of the notes are particularly mellow, and closely approach to the whistle of the Blackbird. It frequents tangled copses, or thick hedges, and, like the rest of its shy tribe, is more frequently heard than seen, usually singing from the very centre of some close retreat; though I have seen it occasionally (like the Black-cap) warbling from the upper light branch of a tree.

* I have found it throughout the greater part of Scotland, particularly where the wooded districts margin the lakes and rivers.

Nest, &c. It builds its nest amongst nettles or other thick herbage, forming it of the decayed stems of *goose-grass* (*Galium aparine*), or the seed-bearing stems of umbelliferous plants, fibres of roots, and a little moss, flimsily interwoven; laying four or five eggs, of a yellowish-grey colour, blotched with wood brown, principally at the larger end. The alarm-call of this species is very similar to that of the White-Throat (*Sylvia cinerea*). In Bewick's early edition of his History of British Birds, a mistake has been committed, in affixing some of the synonyms of the *Sylvia hippolais* (Lesser Pettychaps), to a bird evidently answering, by the description there given, to the species now under consideration.

PLATE 46. Fig. 4. A male bird of the natural size.

General
descrip-
tion.

The whole of the upper parts oil-green, with a shade of ash-grey. On each side of the lower part of the neck is a patch of ash-grey. Throat greyish-white. Breast and flanks yellowish-grey, inclining to wood-brown. Belly and vent greyish-white. Orbita of the eyes white. Irides brown. Bill wood-brown. Legs and claws bluish-grey.

The female is similar in plumage to the male bird.

The young of the year have the region of the eyes greyish-white. Head, upper part of the neck, back, rump, and wing-coverts, yellowish-brown, passing into oil-green. Quills greenish-grey, edged with oil-green. Cheeks and sides of neck yellowish-grey. Throat, breast, sides, and under tail-coverts wine-yellow. Middle of the belly white. Legs, toes, and claws pearl-grey.

WHITE-THROAT.

CURRUCA CINEREA, Bechst.

PLATE XLVI. FIG. 6.

Sylvia cinerea, Lath. Ind. Ornith. v. 1. p. 514.*Motacilla Sylvia, Linn.* Syst. 1. p. 330.—*Gmel.* Syst. 1. p. 956.*Parus cinereus, Briss.* 3. p. 549. 4.*Becfin grisette, Temm.* Man. d'Ornith. v. 1. p. 207.*Fauvette grise, ou grisette, Buff.* Ois. v. 5. p. 132.—*Id.* Pl. Enl. 579. f. 3.*Fahle Grasmücke, Bechst.* Naturg. Deut. v. 3. p. 534.—*Meyer,* Tasschenb. Deut. v. 1. p. 225.*Rietwink, Sepp.* Nederl. Vög. v. 3. t. p. 97.*White-Throat, Br.* Zool. 1. No. 160.—*Arct. Zool.* 2. p. 422.—*White, Hist.**Selb.* p. 103.—*Lath.* Syn. 4. 19. p. 428.—*Mont.* Ornith. Dict.—*Bewick's**Br.* Birds, v. 1.—*Lewin's Br.* Birds, 3. t. 104.—*Pult.* Cat. Dorset. p. 9.

PROVINCIAL—Nettle-Creeper, Muggy-Cut-Throat.

THIS species is much more numerous, and more equally diffused throughout Britain, than either of the foregoing. It is, like most of the genus, a regular visitant to our shores during the summer, arriving at the same time with those already described, and preparing for its equatorial migration about the latter part of September.

It inhabits hedges and thickets; and possesses a pleasing but cursory song, frequently uttered upon the wing, as it rises from the spray on which it had been perched, to a considerable height in the air, and descends slowly to the same spot from whence it had taken its departure. In executing this movement, its flight is very peculiar, and must have attracted the attention of all persons interested in ornithological pursuits. When singing, the feathers upon the crown of the head are erected, and the throat suffers considerable inflation.—It builds amongst brambles, nettles, or other tall weeds. The nest is of frail and open texture, composed of the withered stems of the Galium aparine, sometimes having a few hairs intermixed with them. The eggs are four or five in number, of a greyish-white, speckled with wood-brown and

Periodical visitant.

Nest, &c.

grey. The young often leave the nest before they are well able to fly, particularly if they happen to be disturbed.

Food. The food of the White-Throat chiefly consists of insects and their larvæ; but in the latter part of the summer it is a destructive visitor to gardens, being particularly fond of cherries, currants, and other smaller fruits.

PLATE 46. Fig. 6. Male bird, natural size.

General description.

Crown of the head and the region of the eyes deep smoke-grey. Upper parts yellowish-brown, tinged with grey. Wing-coverts margined with pale orange-brown. Quills blackish-brown, margined with yellowish-brown, except the exterior one, which has its outer web white. Tail brown, the exterior feather having its end and outer web white, and being rather shorter than the rest. Throat and middle of the belly white. Breast slightly tinged with rose-red. Flanks ash-grey, tinged with red. Bill and legs blackish-brown. Irides yellowish-brown. The young have the reddish-brown of the upper parts of a deeper shade than the adults; and have also a white space between the bill and the eye; and, in them, the outer web of the exterior quill is of a pale reddish-brown colour, instead of being white. The tints of plumage in the female are less pure, and more inclining to reddish-brown than in the male bird. Breast white, and without the rosy tint.

LESSER WHITE-THROAT.

CURRUCA GARRULA, Briss.

PLATE C. FIG. 4.

- Curruca Garrula, *Briss. Orn.* 3. 384. 7.
Curruca sylviella, *Flem. Br. Anim.* 1. 70. No. 67.
Motacilla Curruca, Linn. Syst. 1. 329. 6.—*Gmel. Syst.* 1. 954.
Sylvia Curruca, Lath. Ind. Orn. 2. 509. sp. 9.—*Temm. Man. d'Orn.* 1. 209.
Sylvia Dumetorum, Lath. Ind. Orn. 2. 522. 45.
Motacilla Dumetorum, Linn. Syst. 1. 334. 31.—*Gmel. Syst.* 1. 985.
Sylvia Sylviella, Lath. Ind. Orn. 2. 545. sp. 24.—*Mont. Orn. Dict. Supp.*
La Fauvette Babillard, *Buff. Ois.* 5. 135.—*Id. Pl. Enl.* 580. f. 3.
Beclf Babillard, *Temm. Man. d'Orn.* 1. 209.
Klapper Grasmücke, *Meyer, Tasschenb. Deut.* 1. 226.
Babbling Warbler, *Arct. Zool.* 2. 422. U.—*Lath Syn.* 4. 417. 6.
White-breasted Warbler, *Lath. Syn.* 4. 447. 41.
Lesser White-Throat, *Lath. Syn. Sup.* 185. t. 113.—*Don. Br. Birds,* 4. t. 86.—*Mont. Orn. Dict. and Sup.*—*Shaw's Zool.* 10. 509.—*Flem. Br. Anim.* 1. 71. No. 67.—*Bewick's Birds, ed.* 1826, p. t. 253.
Babillard, *Rennie's Mont. Orn. Dict.* 15. with a figure of the nest and eggs.

As no opportunity of examining this pretty little Warbler had been afforded me, previous to the publication of the first edition of these Illustrations, I was obliged to limit my notice of it, as a British species, to a cursory note; as I could not, without a personal inspection, reconcile the synonyms of the various authors who have adverted to it. The kind attentions of my ornithological friends, have since then furnished me with specimens from different parts of the kingdom, by which I am now enabled to give a more detailed description, as well as a figure of the bird, upon one of the supplementary plates.—Its retired habits, and the impatience of observation which it so constantly exhibits, in always esconcing itself amidst the thickest entanglements of hedges or underwood, contributed, for a long time, to keep it out of view, and cause it to be regarded as a species of great rarity, and of very local distribution. The interest, however, excited of late years, by the keen pursuit of this branch of Natural History, has led to a much closer search after the respective species, and it is now satisfactorily ascertained,

that the present, and several other supposed rare birds, far from being so, or even much limited in range during their periodical abode in this kingdom, are as abundant, and as widely disseminated, as many others which, from dissimilar habits, have long been familiarly known to us.—By MONTAGU, the limits of the present species, in a northern direction, were supposed not to extend beyond Lincolnshire; where he speaks of it as being more abundant than in any other part of England. It has, however, been found to advance annually as far as the Tyne, being common in the county of Durham; and Dr RENNIE (in his edition of MONTAGU's Ornith. Dict.) says, that he is confident of having seen it in *Ayrshire*, and at Musselburgh Haugh, near Edinburgh; though it does not appear that he actually obtained specimens for examination, and therefore may possibly have mistaken some other bird, or the Common White-Throat, for it. For my own part, although I have sought after it with great attention and perseverance, I have never been able to detect it even in the northern parts of Northumberland, where the larger species is abundant.—It inhabits the thickest hedges, in which it conceals itself with great adroitness, and the intricacies of which it threads with the rapidity of a mouse; on which account specimens are only to be obtained with difficulty and by patient watching. In this situation, its frequently repeated and peculiarly shrill note (which has been compared to the word *actch* or *atsch*) alone gives notice of its contiguity.—Its nest (a specimen of which, together with the eggs and parent birds, I received from Suffolk) is principally composed of the decayed stems of the *Galium aparine*, neatly though widely interwoven with some locks of *wool*, and with cottony substances intermixed; the latter apparently the envelopes of the eggs of spiders. The bottom of the nest is lined with a few small fibrous roots; but the whole texture is so open as to be easily seen through, resembling, though upon a smaller scale, the nests of the *White-Throat*, *Black-Cap*, and *Pettychaps*. The eggs are of a

greenish-white, with spots and specks of ash-grey and brown, principally at the larger end, and disposed in the form of a zone; but these spots are sometimes thinly scattered over the whole surface. The species is plentifully distributed throughout the temperate and warmer parts of Europe, and its periodical polar migration extends as far northward as Sweden. In its affinities, it is even more closely allied to the Passerine Warbler (*Curruca minor* of BRISSON, *Becfin Passerinette* of TEMM.) than to the Common White-Throat, with which it has no doubt been frequently confounded in this country; but may always be distinguished by its inferior size, different-coloured legs, and from being without the rich brown upon the scapulars and wing-coverts that distinguishes the larger species.—*Its food, like that of its congener, consists of insects and their larvæ, and the smaller fruits and berries.*

PLATE C. Fig. 4. Represents this bird of the natural size.

Bill brown, fuller towards the base. Irides reddish-brown. Crown of the head and nape of the neck ash-grey, with the auriculars darker. Throat, breast, and belly pure silvery white. Sides and flanks tinged with pinkish-brown. Upper parts pale brown, tinged with grey. Tail broccoli-brown; the exterior feather having its outer web entirely white, and a great part of its inner web the same. Legs and feet bluish-grey.

SUBFAMILY SYLVIANA.

In this group, the delicate form and peculiar features of the *Sylviadæ* are carried to the greatest extent, and it ranks, of course, as the pre-eminently typical circle of that interesting portion of the Insessores. It embraces the most diminutive species of the Warblers; the *Gold-Crests*, or members of the genus *Regulus* (Cuv.), being by Mr SWAINSON con-

sidered its typical representatives. In it also appear to be included the various small species of Warblers known by the name of *Willow-Wrens*; all nearly allied to each other in colour and form (of which the Common Yellow Willow-Wren, *Sylvia Trochilus*, and Lesser Pettychaps, *Sylvia Hippolais*, may be cited as examples), and connected apparently with the smaller species of the genus *Curruga* of the preceding Subfamily, as well as with the slender-billed birds of the succeeding Subfamily *Pariana*. The genera *Melizophilus* (LEACH), represented by the Dartford Warbler; *Malurus* (VIEILL.), containing the beautiful soft-tailed Warblers from Australia (all formerly included in LATHAM's genus *Syl'via*); *Princa* (HORSF.) and *Culicivora* (SWAINSON) are also referable to it, and, by the various modifications of character they exhibit, support the necessary chain of affinities with the other groups and larger divisions of the Insessorial order.

GENUS MELIZOPHILUS, LEACH.

GENERIC CHARACTERS.

HEAD large; bill rather short, gently arched from the base, compressed, with the tip finely emarginated; tomia of both mandibles inflected towards the middle; gape slightly bearded; nostrils basal, lateral, longitudinally cleft. Wings short; the first quill very small, the second shorter than the third, fourth, and fifth, which are equal to each other, and the longest in the wing. Tail long and soft. Legs having the tarsi strong, and longer than the middle toe. Feet of three toes before, and one behind; the front toes divided. Claws sharp, and tolerably long; the middle claw nearly equal in length to that of the hind toe.

This genus was formed by Dr LEACH for the reception of the Dartford Warbler, a bird differing essentially in character from the other species, with which it had been previously

associated. In its affinities, it approaches very near to the *Maluri* of VIEILLOT, possessing the same short body and puffy head, and in a great degree the soft and lengthened tail ; which latter is one of the distinguishing characters of these beautiful birds. The habits and manners of our species, from the detailed and interesting description of MONTAGU, appear, in many respects, to approach those of the Titmice, as well as of the smaller species of *Curruca* belonging to the preceding Subfamily *Philomelina*.

DARTFORD WARBLER.

MELIZOPHILUS PROVINCIALIS, Leach.

PLATE XLVI. FIG. 6.

Sylvia provincialis, Temm. Man. d'Ornith. I. p. 210.

Sylvia Dartfordiensis, Lath. Ind. Ornith. v. 2. p. 517. 31.—*Mont. Trans. Linn. Soc. vol. 7.* p. 280, and vol. 9. p. 191.

Motacilla provincialis, Gmel. Syst. 2. p. 958. 67.

Le Pitte-Chou de Provence, Buff. Ois. v. 5. p. 158.—*Id. Pl. Enl.* 655. f. 1.
Becfin Pitte-Chou, Temm. Man. d'Ornith. v. 1. p. 211.

Dartford Warbler, Br. Zool. I. No. 161. t. 56.—*Lath. Syn.* 4. p. 437. 27.—
Id. Supp. p. 181.—*Mont. Ornith. Dict.*—*Id. Supp.*—*Lewin's Br. Birds*,
3. t. 106.—*Walc. Syn.* 2. t. 237.—*Bewick's Br. Birds*, 1. t. 210.

THIS species is indigenous, but confined to some particular districts in the southern parts of England. It was first noticed by DR LATHAM, in the year 1773, who procured a pair of these birds from Bexley Heath, near Dartford, in Kent ; from which latter place it has taken its trivial English name. The discovery was communicated to PENNANT, who accordingly published an account of the species in his British Zoology. Since that period it has been found in several places ; amongst others, in parts of Devonshire and Cornwall, by that indefatigable naturalist the late GEORGE MONTAGU, Esq. ; and in which counties he has ascertained that it breeds, and remains through the whole year.

Its body is very small, not much exceeding that of the Common Wren, but its great length of tail gives an appear-

ance of superior bulk. In this country it lives upon the open downs and commons that abound with furze, where it meets with a secure retreat, and in the thickest part of which it conceals itself upon the slightest alarm, creeping from bush to bush with great celerity.—According to MONTAGU, its song is pleasing, though hurried in note, and (like that of the White-Throat) is often uttered whilst the bird is suspended on wing over the furze.—It feeds upon flies, grasshoppers, and other insects.—The nest is formed of the same materials as that of the White-Throat, with the addition of being usually lined with the finest stalks of a species of *carex*, is placed in the centre of the thickest furze bush, and only to be found by a very close and patient search. The eggs also resemble in colour those of the above-mentioned bird, but are smaller. For a more particular account of this bird, and its young, my readers are referred to MONTAGU's Supplement to his Ornithological Dictionary, or to the 9th volume of the Linnean Transactions, where he has entered into the subject in his usual minute and scientific manner. According to TEMMINCK, this bird is abundant in the southern parts of Europe; but unknown in Germany and Holland.

PLATE 46. Fig. 6. A male of the natural size.

General description.

Bill primrose-yellow at the base, the tip black. Irides and eyelids pale yellowish-brown. Upper parts of the body deep clove-brown. Cheeks grey. Throat, neck, and breast cochineal-red, inclining to brownish purple-red. Mesial line of the belly white. Quills blackish-brown, having the outer webs margined with deep ash-grey, and those of the coverts with reddish-brown. Tail wedge-shaped, blackish-brown; the exterior feather tipped with white, and having the outer web margined with the same; the next feather also with a white tip. Legs and toes inclining to sienna-yellow. The tints of plumage in the female and young birds are less bright and distinct; and in them also are several fine white

streaks upon the neck and throat, which entirely vanish in the old birds.

GENUS SYLVIA, *AUCT.* SYLVIA.

GENERIC CHARACTERS.

Bill slender, widened at the base; suddenly compressed in front of the nasal groove; upper mandible gently deflected towards the tip, which is emarginated; gape slightly bearded; nostrils basal, lateral, ovoid, and partly concealed by the advancing feathers of the forehead. Wings of mean length; first quill abortive; second shorter than the third and fourth, which are the longest. Tail even at the end when expanded, subfurcate when closed. Legs having the tarsi long and slender. The outer toe joined at its base to the middle one, hind toe strong. Claws sharp, moderately curved; that of the hind toe the largest. General form slender.

For this interesting genus (whose members are all nearly allied in colour, form, and manners, and considered apparently by the older authors as the peculiar representatives of the Warblers) I have retained the name of *Sylvia*, although Mr SWAINSON has bestowed that appellation upon the *Goldcrests*, which he considers (and I think justly) to be the typical form of this subfamily. These last having, however, been previously characterized by CUVIER, under the title of *Regulus*, I have thought it as advantageous to science, and perhaps less puzzling in respect to nomenclature, to retain the names under which each group has already been recognised. In the form of the bill, which becomes much compressed anteriorly, they make a near approach to the Goldcrests, with which their manners also in a great degree assimilate. They are birds of much alertness, and in almost constant action, moving with celerity among the branches and foliage of shrubs and trees; where they search for their

insect-prey, in its perfect as well as larva state. They are also, from the form of their feet, able to move readily upon the ground, where their nest is usually formed, and where they rear their young.

LESSER PETTYCHAPS.

SYLVIA HIPPOLAIS, Lath.

PLATE XLVII. FIG. 1.

Sylvia hippolais, Lath. Ind. Ornith. v. 2. p. 507. sp. 4.

Motacilla hippolais, Linn. Syst. 1. p. 330. 7.—*Gmel.* Syst. 2. p. 954.

Ficedula septima, Aldrov. (Pettychaps), *Raii* Syn. p. 79. A. 7.—*Will.* p. 158.

La Fauvette des Roseaux, *Buff.* Pl. Ind. 581. f. 2., but the description of this figure refers to the true Fauvette des Roseaux (the *Sylvia arundinacea*).

Le Pouillot, ou le Chantre, *Buff.* Ois. 5. 344.—*Id.* Pl. Enl. 651. 1.

Le Figuier jaune et brun, *Buff.* Ois. 5. 295.

Becfin Pouillot, *Temm.* Man. d'Ornith. 1. 244.

Fitis Sanger, *Meyer*, Taschenb. 1. 248.

Lesser Pettychaps, *Br. Zool.* 1. No. 149.—*Lath.* Syn. 4. p. 413. 3.*—*Id.* Sup. 2. p. 236.—*Lewin's Br. Birds*, 3. t. 101.—*Pult. Cat. Dorset.* p. 9.—*Mont. Ornith. Dict.*—*Id. Supp.*

Least Willow-Wren, *Bewick's Br. Birds*, 1. p. 232.

PROVINCIAL—Chip-Chap, Chiff-Chaff, Choice and Cheap.

Periodical
visitant.

THE similarity in form and plumage between this and the two following species, has been a frequent cause of confusion; and, in dead or preserved specimens, it requires an attentive examination and comparison to become acquainted with the distinguishing features of each. In a living state, the difference of note, as well as peculiar tokens in their respective habits, are sufficient ground of distinction to the naturalist. The species now before us is the earliest harbinger of spring, as it usually arrives before the month of April; indeed, MONTAGU mentions instances of a much earlier appearance, viz. in January and February. But I should be inclined to think, with him, that such individuals had probably wintered in our island, particularly as these observations were made in

winters of uncommon mildness, and in the warmest parts of Devonshire.—Its arrival is announced by its monotonous song, frequently repeated, and which it continues to utter through the greatest part of the summer.

The provincial names it has acquired, as above recited, are expressive of the *double note* that forms the whole of this repetition. This bird is very common in the southern and midland counties, but in Northumberland and other parts of the north of Britain, it is not so numerous as either the Wood or Willow Wrens. From the Yellow (or Willow) Wren (*Sylvia trochilus*), although most similar in plumage, it varies in being of less size, and in having the upper parts less tinged with yellow, and the legs of an umber or blackish-brown instead of a pale yellowish-brown. The fine sulphur-yellow of the Wood-Wren (*Sylvia sibilatrix*), the well marked eyebrow, and the silvery whiteness of the abdominal plumage, are sufficient to distinguish it from this species. I have alluded (under the *Greater Pettychaps*) to a mistake in Mr BEWICK's works relative to the synonyms of the lesser. The present bird will be easily recognised under the description of the *Least Willow-Wren* of that author.

It frequents woods, thickets, and hedges, and feeds upon Food winged insects and larvæ, in search of which it is in constant motion amongst the branches.—Its nest is made in very low Nest, &c. bushes, or on the ground, in tufts of grass, being composed of decayed leaves and dried grass, lined with a profusion of feathers.

The eggs, five or six in number, are white, speckled with purplish-red at the larger end, and with a few spots dispersed over the sides. Although the earliest of our visitants in the spring, it is also amongst our last autumnal fugitives, being sometimes observed as late as the end of October.

PLATE 47. Fig. 1.

Length between four and five inches. Upper parts oil-green, tinged with yellowish-grey. Between the bill General description.

and eyes, and over each eye, is a narrow faint yellowish-white streak. Wing-coverts pale yellowish-brown, margined with yellowish-grey. The whole of the under parts, including the *under tail-coverts*, pale primrose-yellow. Legs and feet *blackish-brown*.

WOOD-WREN.

SYLVIA SIBILATRIX, Bechst.

PLATE XLVII. FIG. 2.

- Sylvia sibilatrix, *Bechst.* Naturg. Deut. v. 3. p. 561.—*Id.* Tasschenb. Deut. p. 176.
 Sylvia sylvicola, *Lath.* Ind. Orn. Sup. v. p. p. 53. sp. 1.—*Linn.* Trans. 4. p. 35.
 Regulus non Cristatus major, *Will.* p. 164.—(Angl.) p. 228.
 Beccin siffleur, *Temm.* Man. d'Ornith. v. 1. p. 223.
 Grüner Sanger, *Meyer*, Tasschenb. Deut. v. 1. p. 247.
 Wood Wren, *Linn.* Trans. v. 2. p. 245. t. 24.—*Lath.* Syn. 2. p. 237.—*Mont.* Ornith. Dict.—*Id.* Suppl.
 Green Wren, *Albin.* 2. t. 86. 6.
 Larger Willow-Wren, *White's* Selb. p. 55.
 Yellow Willow-Wren, *Bewick's* Br. Birds, 1. p. 229.

Periodical
visitant.

THIS bird seems to have remained long unnoticed as a distinct species, from its likeness to the Yellow (or Willow) Wren (*Sylvia trochilus*), with which it is still frequently confounded. The peculiar difference of its plumage consists in the more vivid tint of sulphur-yellow on the upper parts, the bright yellow of the eye-streak, and the pure white of the *belly* and *under tail-coverts*, which last named parts both in that bird, and the preceding one (also an instance of strong similarity), are tinged with yellow. It usually makes its appearance in the southern counties about the latter part of April, but in Northumberland it is seldom seen before the beginning of May; ten days or a fortnight appearing to me, from repeated observation, to be the difference of period in the arrival of all our summer visitants, between the southern and northern parts of the kingdom.—It frequents natural

woods, and plantations of old growth, and is seldom seen in hedges or brush-wood, like the Yellow Wren. In a living state, it is easily recognised by its peculiar song, which resembles the word *twee*, repeated twice or thrice rather slowly, concluding with the same notes hurriedly delivered, and accompanied by a singular shake of the wings. This song is also frequently uttered during flight, as it slowly descends to the twig from whence it had previously risen.—The nest Nest, &c. of the Wood-Wren is similar in form to that of the before mentioned species, and is commonly placed upon the ground amongst the herbage; is externally constructed of dry grass, dead leaves and moss, but differs from them in being *invariably* lined with fine grass, and hair, instead of feathers. The eggs are six in number, white, with numerous purplish-red spots over the whole surface, but confluent, and forming a zone towards the larger end.—The food of the Wood-Wren consists of insects and their larvæ, principally of those kinds that feed upon the foliage of trees. It is of general diffusion through the kingdom, and to be met with in all situations congenial to its habits.

Food.

PLATE 47. Fig. 2. Natural size.

Top of the head, and all the upper parts sulphur-yellow, General description.
the lower (or root), half of the feathers tinged with ash-grey. Forehead, and eye-streak (which is large and well defined), sulphur inclining to gamboge yellow. Cheeks, throat, front of neck, marginal ridges of the wings, and thighs, pale sulphur-yellow. The rest of the lower parts, and the under tail-coverts, pure white. Tail slightly forked, hair-brown, margined with sulphur-yellow, except the outer feather, which is of a uniform hair-brown colour. Legs pale yellowish-brown. Bill, having the under mandible pale yellowish-brown, the upper rather darker. Wings reaching as far as the extremity of the upper tail-coverts, or two-thirds of the length of the tail.—Both sexes are similar in plumage.

YELLOW WREN.

SYLVIA TROCHILUS, Lath.

PLATE XLVII. FIG. 3.

- Sylvia trochilus, Lath.* Ind. Ornith. v. 2. p. 550. sp. 15. 5.
Motacilla trochilus, Linn. Syst. 1. p. 338. 49.—*Gmel.* Syst. 1. p. 995. sp. 49.
Asilus, Briss. Orn. v. 3. p. 479. 45.—*Raii* Syn. p. 80. A. 10.—*Will.* p. 164.
Motacilla acrecula, Linn. Syst. 1. p. 338. 49. B.
Becfin à poitrine jaune, Temm. Man. d'Ornith. 1. 222.
Le Grand Pouillot, Cuv. Reg. Anim. 1. 369.
Gelebauchiger Sanger, Meyer, Tasschenb. 1. 246.
Yellow Wren, Br. Zool. 1. No. 151.—*Arct. Zool.* 2. No. 319.—*White's Hist. Selb.* 28. 55.—*Lath.* Syn. 4. p. 512. 147.—*Id. Supp.* 2. p. 238.—*Mont. Ornith. Dict.*—*Id. Supp.*—*Lewin's Br. Birds*, 3. t. 113.—*Pult. Cat. Dorset*, p. 9.—*Don. Br. Birds*, 1. t. 14.
Scotch Wren, Br. Zool. 2. No. 152.—*Arct. Zool.* 2. p. 420.—*Lath.* Syn. 4. p. 513.
Willow Wren, Bewick's Br. Birds, 1. p. 222.

PROVINCIAL—Ground Wren, Ground Huckmuck, Straws-meer.

Periodical
visitant.

THIS species equals the foregoing one in size, but differs from it in having the under parts tinged with yellow, and the colour of the back and scapulars more inclining to oil-green, with a tinge of grey. It precedes it also in its arrival in this country by a week or more, being usually either heard or seen in Northumberland about the middle of April; but, of course, earlier in the southern counties. It is also more generally dispersed, being met with in hedges and underwood, as well as amongst trees of larger growth, where alone the Wood-Wren is to be found during its residence with us. Its striking similarity in shades of plumage and general appearance, has caused it also to be frequently confounded with the Lesser Pettychaps (as I have before remarked in the description of that bird); but the colour of the legs forms a strong point of distinction, being, in this bird, of a pale yellowish-brown, whilst those of the Pettychaps are always of a brownish-black. It also exceeds this latter bird in size. Its song is different from either of these two similar species, and consists of two or three notes, not unpleasingly modulated.

According to MONTAGU, it does not extend so far to westward as the Wood-Wren, and is a rare bird in Cornwall; but I have found it co-extensive with that species in the northern parts of the kingdom. It is of a very active nature, and in constant motion, flitting from branch to branch, in search of the smaller winged insects that form its food.—It commences nidification soon after its arrival, usually selecting some dry bank, side of ditch, or bush close to the ground. The nest is composed of moss and dry grass, lined with feathers, of an oval shape, with a small opening near the top. It lays six or seven eggs, white, with numerous reddish-brown spots towards the larger end, and with a few specks dispersed over the rest of the surface. This species seems to be of common occurrence throughout the greater part of Europe.

Food.

Nest, &c.

PLATE 47. Fig. 3. Natural size.

Head and upper parts of the body pale oil-green, tinged with a cinereous or grey shade. Lesser wing-coverts and margins of quill-feathers pale sulphur-yellow. From the base of the bill a streak of primrose-yellow proceeds over the eyes; but not so well defined as that of the Wood-Wren. Cheeks and throat primrose-yellow, passing into sulphur-yellow on the breast. Middle of the belly pure white. Under tail-coverts primrose yellow. Quills and tail hair-brown, the latter slightly forked, and the margins of the feathers yellowish-white. Wings reaching half the length of the tail. Legs yellowish-brown. Bill having the lower mandible yellowish, the upper brown.

General description.

GENUS REGULUS, CUV. REGULUS.

GENERIC CHARACTERS.

Bill straight, slender, higher than broad, compressed throughout its whole length, the tomia, or cutting edges, bending inwards. Nostrils basal, ovoid, covered with a small bristly feather directed forwards. Wings having the first quill short; the second considerably shorter than the third, which last is the longest. The tarsi of the legs long. Feet with three toes before, and one behind, long and slender; the outer toe joined at its base to the middle one. Claws curved, and sharp.

The Gold-crests, which exhibit the peculiar characters of the Sylviadæ in the highest perfection, are among the most diminutive of the feathered race. They are of very active habits, and in ever-varying motion, and in these respects bear a near resemblance to the Titmice of the subfamily *Pariana*; the passage to which is beautifully effected by the close affinity subsisting between the genus *Culicivora* (SWAINS.), of the subfamily *Sylviana*, and *Setophaga* (SWAINS.), an introductory form of the prior subfamily. Europe possesses two species of the present genus, but only one has been hitherto found in Britain. A third and fourth belong to America; and a fifth to the northern parts of Asia.

GOLD-CRESTED REGULUS.

REGULUS AURICAPILLUS.

PLATE XLVII. FIG. 4.

Sylvia Regulus, *Lath.* Ind. Ornith. v. 2. p. 548. sp. 152.

Motacilla Regulus, *Linn.* Syst. 1. p. 338. 48.—*Gmel.* Syst. 1. p. 995.

Regulus cristatus, *Raii* Syn. p. 79. A. 9.—*Will.* p. 163. t. 42.—*Briss.* 3. p. 579. 17.

Roitelet ordinaire, *Temm.* Man. d'Ornith. v. 1. p. 229.

Le Roitelet, *Buff.* Ois. v. 5. p. 363.—*Id.* Pl. Enl. 651. 3.

Gregönter Sanger, *Meyer*, Tasschenb. Deut. v. 1. p. 250.—*Frisch.* t. 24. f. 4.

Golden-crested Wren, Br. Zool. No. 153.—Arct. Zool. 2. No. 321.—*Will.*

(Ang.) p. 227.—*Lath.* Syn. 4. p. 508. 145.—*Lewin's* Br. Birds, 3. t. 112.

—*Mont.* Ornith. Dict.—*Walc.* Syn. 2. t. 243.—*Pult.* Cat. Dorset. p. 9.—

Bewick's Br. Birds, v. 1. p. 224.—*Edw.* t. 254. 1.—*Low's* Fau. Orcad.

THIS, although the most diminutive of the British birds, is yet of so hardy a constitution, as to brave the usual rigours of our winter. It is equally dispersed through England and Scotland, extending even to the Orkney Isles, where, according to Low, it is also indigenous. Woods and plantations are its habitual places of residence, but particularly those abounding in spruce, larch, and other species of fir, amongst which it not only finds a constant supply of the insect-food most congenial to it, but situations best adapted for concealment, and for its peculiar mode of nidification.

It breeds amongst the earliest of our birds, and I have known its nest to contain fledged young as early as in the third week of April.

The male generally commences his song of invitation about the middle of February. This consists of two or three stridulous, though not unpleasant notes, frequently repeated, and ending rather abruptly. The common call-note of the species is a very weak cry, similar to that of the Creeper (*Certhia familiaris*).—The nest is of an elegant spherical structure, Nest, &c. formed of moss and lichens, lined with a quantity of feathers,

and is usually suspended from the under part of a thickly-clothed fir-branch ; and not unfrequently, in failure of such trees, from the small branch of an oak. The eggs vary from seven to ten, are of a pale wood-brown colour, and weigh from nine to ten grains each. In attending to the economy of this handsome little bird, the following circumstances have passed under my observation.

On the 24th and 25th of October 1822, after a very severe gale, with thick fog, from the north-east, (but veering, towards its conclusion, to the east and south of east), thousands of these birds were seen to arrive upon the sea-shore and sand-banks of the Northumbrian coast ; many of them so fatigued by the length of their flight, or perhaps by the unfavourable shift of wind, as to be unable to rise again from the ground, and great numbers were in consequence caught or destroyed. This flight must have been immense in quantity, as its extent was traced through the whole length of the coasts of Northumberland and Durham. There appears little doubt of this having been a migration from the more northern provinces of Europe, (probably furnished by the pine-forests of Norway, Sweden, &c.), from the circumstance of its arrival being simultaneous with that of large flights of the Woodcock, Fieldfare, and Redwing. Although I had never before witnessed the actual arrival of the Gold-crested Regulus, I had long felt convinced, from the great and sudden increase of the species during the autumnal and hyemal months, that our indigenous birds must be augmented by a body of strangers making these shores their winter's resort.

A more extraordinary circumstance in the economy of this bird took place during the same winter *, viz. the total disappearance of the whole tribe, *natives* as well as strangers, throughout Scotland and the north of England. This happened towards the conclusion of the month of January 1823,

* See vol. v. p. 397, of Memoirs of Wernerian Society.

and a few days previous to the long-continued snow-storm so severely felt through the northern counties of England, and along the eastern parts of Scotland. The range and point of this migration are unascertained, but it must probably have been a distant one, from the fact of not a single pair having returned to breed, or pass the succeeding summer, in the situations they had been known always to frequent. Nor was one of the species to be seen till the following October, or about the usual time, as I have above stated, for our receiving an annual accession of strangers to our own indigenous birds.

In habits the Regulus approaches to the genus *Parus*, as well as to some of the smaller species of *Sylvia*. It frequently associates with the *Parus caudatus*, *ater*, and *cæruleus*, is similar to them in its gestures, and is equally active and unintermitting in search of its food, which consists principally of different species of *culices* and *tipulæ*, with *aphides* and their larvæ. Food.

It is found throughout Europe, and as far to the northward as the Arctic Circle.

PLATE 47. Fig. 4. The male bird, natural size.

Bill black. Feathers of the crown of the head elongated and silky, of a rich orange, fading on the sides into gamboge-yellow. On each side of this crest is a list of black. Cheeks, under part of the neck, and upper parts of the body, fine wax-yellow. Quills brownish-black, margined with wine-yellow. Greater coverts tipped with yellowish-white. Base of the bill, region of the eyes, and all the lower parts, yellowish-grey; but with a tinge of brown upon the breast. Legs and feet brown.

General description.

The crest of the female is not so bright in colour as that of the male bird; in other respects she does not exhibit any difference.

SUBFAMILY PARIANA.

The Titmice (or typical members of the genus *Parus*), from the increasing strength and subconic form of the bill, were generally placed by the earlier systematists in immediate connection with the *Fringillidæ*, and other members of the Conirostral tribe. A stricter analysis, however, satisfactorily shews, that they more nearly approximate to the *Sylviadæ*, and that, in the natural arrangement, they form an aberrant circle with other closely allied genera in that interesting family. In Mr VIGORS' "Arrangement of the genera of Birds," they are stationed amongst the *Pipridæ*, his fifth family of the Dentirostral tribe, and answering to SWAINSON's *Ampelidæ*. But although a strong affinity undoubtedly exists between the true Titmice and the genera *Pipra*, LINN., and *Pardalotus*, VIEILL., it is only such an affinity as is necessary to sustain the connection between the two groups; and I therefore consider, that the proper and natural station of the Titmice, is that assigned to them by MR SWAINSON.

To this subfamily, as aberrant forms, belong the members of the genus *Accentor* (BECHST.), and perhaps that of *Sciurus* (SWAINS.), both of which possess great interest, as the mediums of connection with other and more distant tribes. Its propinquity to the preceding subfamilies *Philomelina* and *Sylviana*, is supported by the genera *Sylvicola* and *Setophaga* of SWAINSON.

GENUS PARUS, LINN. TITMOUSE.

GENERIC CHARACTERS.

Bill strong, short, subconical, slightly compressed, sharp-pointed, and hard; notch almost effaced. Nostrils basal and round, covered with reflected bristly feathers. Feet, with

three toes before, and one behind ; the anterior ones divided to their origin, the hind toe strong, and armed with a long and hooked claw. Wing, having the first quill of mean length, or almost deficient ; the second shorter than the third ; the fourth and fifth the longest.

The subjects of this well marked genus are of an active and bold character. Most of the species inhabit woods and plantations, and are remarkable for the various attitudes in which they hang upon the branches of trees, in search of insects and their larvæ. They also feed upon grain and many hard seeds, the kernels of which they obtain by repeated strokes of their sharp-pointed bill. Sometimes they will attack the young of other small birds, killing them by a fracture of the skull. They generally make their nests in the holes of trees or walls.

GREAT TITMOUSE.

PARUS MAJOR, Linn.

PLATE LI. FIG. I.

Parus major, Linn. Syst. 1. p. 341. 3.—*Gmel.* Syst. 1. p. 1006. sp. 3.—*Lath.* Ind. Ornith. v. 2. p. 562. 1.—*Raii* Syn. p. 73. A. 1.—*Wil.* p. 174. 43.—*Briss.* 3. p. 539. 1.

La Grosse Mesange ou Charbonnière, *Buff.* Ois. v. 5. p. 392. t. 17.—*Id.* Pl. Enl. 3. f. 1.

Mesange Charbonnière, *Temm.* Man. d'Ornith. v. 1. p. 287.

Kohlmeise, *Bechst.* Naturg. Deut. v. 3. p. 834.—*Meyer,* Tasschenb. Deut. v. 1. p. 267.—*Frisch.* t. 13. f. 1.

Great Titmouse, or Oxeye, *Br. Zool.* 1. No. 162.—*Arct. Zool.* 2. p. 425. A.—*Will.* (Angl.) p. 240. t. 43.—*Lewin's Br. Birds.* 3. t. 117.—*Lath.* Syn. 4. p. 536. 1.—*Mont.* Ornith. Dict. v. 2.—*Albin.* 1. t. 46.—*Haye's Br. Birds,* t. 38.—*Pult.* Cat. Dorset. p. 10.—*Bewick's Br. Birds,* 1. p. t. 237.

THE disposition of the well-contrasted colours in this Titmouse, renders it one of the handsomest, not only of its genus, but of our British birds.—It is very common through-

Food.

out the kingdom in all wooded and enclosed districts, but, in the more open parts of the country, comparatively of rare occurrence.—Its food, during the greater part of the year, consists of insects and larvæ, which it finds upon the foliage, or in the interstices of the bark of trees. It frequently associates with others of its tribe, displaying similar attitudes, and exerting equal activity in search of its prey. In autumn, and during winter, it subsists upon grain, nuts, and other seeds, and I have frequently seen it enjoying a repast on carion, or other animal remains.—It sometimes also will attack a bird its inferior in size, or one in a sickly state, fracturing its skull by repeated strokes of its pointed bill. Its usual call-note is a kind of chatter, similar to, but louder than, that of the Blue Titmouse. But in spring, as the pairing season approaches, it uses a great variety of notes or calls, amongst which is one closely resembling the spring-call of the Chaffinch, sounding like the word *pink*; and another not unlike the jarring noise produced in the sharpening of a saw.

It breeds in the holes of decayed trees, or in those of old and ruinous walls; and in the former case, the excavation is made by the bird itself, which I have repeatedly seen busily engaged in this task, and have admired the rapidity with which the work advanced. The hole is often of considerable depth, and at the bottom (where it is rather enlarged) the nest is placed; the materials of which are moss, hair, and feathers.

Nest, &c.

The eggs, from six to eight in number (but, according to TEMMINCK, from six to fourteen or fifteen), are white, spotted with reddish-brown, and scarcely to be distinguished from those of the Nut-hatch. This species is found throughout Europe, but more abundantly in its cold and temperate regions. It is also said to be met with in Africa, in the neighbourhood of the Cape of Good Hope. When seized, it defends itself vigorously, inflicting a severe bite with its sharp-pointed bill.

PLATE 51. Fig. 1. Natural size.

Bill black. Head, throat, and lower part of the neck, General description.
black. Cheeks and ear-coverts white. On the nape of
the neck is a spot of white. Back olive-green. Rump
bluish-grey. Wing-coverts greyish-blue, tipped with
white. Quills greenish-grey, edged with pale greyish-
blue. Tail the same, having the exterior web of the
outer feather white. Breast and belly sulphur-yellow,
with a black list or streak running down the mesial
line. Under tail-coverts white. Legs bluish-grey.
The colours in the female bird are the same, but they have
not the superior gloss that distinguishes the plumage of
the male.

BLUE TITMOUSE.

PARUS CÆRULEUS, Linn.

PLATE LI. FIG. 2.

Parus cœruleus, Linn. Syst. 1. p. 341. 5.—*Gmel.* Syst. 1. p. 1008. 5.—*Raii*
Syn. p. 74. A. 4.—*Lath.* Ind. Ornith. v. 2. p. 566. 12.—*Will.* p. 175. t. 43.
—*Briss.* 3. p. 554. 2.
Le Mesange bleue, Buff. Ois. v. 5. p. 413.—*Id.* Pl. Enl. 3. f. 2.—*Temm.*
Man. d'Ornith. v. 1. p. 289.
Blaumeise, Bechst. Naturg. Deut. v. 3. p. 860.—*Meyer,* Tasschenb. Deut.
v. 1. p. 269.—*Frisch.* t. 14. f. 1. A.
Blue Titmouse, Br. Zool. I. No. 163. t. 57. f. 2.—*Arct. Zool.* 2. p. 427. D.
—*Albin.* 1. t. 47.—*Lath.* Syn. 4. p. 543. 10.—*Will. (Angl.)* p. 242. t. 43.
—*Mont. Ornith. Dict.* v. 2.—*Haye's Br. Birds,* t. 38.—*Walc. Syn.* 2.
t. 245.—*Pult. Cat. Dorset.* p. 10.—*Bewick's Br. Birds,* 1. p. t. 237.

PROVINCIAL—Tomtit, Nun, Blue-Cap, Hickmall, Billy-Biter.

THE great abundance and very general dispersion of the Blue Titmouse throughout Britain, have lessened the interest its beautiful and delicate plumage in a species of rarer occurrence would, without doubt, have commanded. It is a bird of very active and lively manners, continually engaged amidst the branches and foliage of trees or bushes, in pursuit of insects, and in this search its attitudes are most amusingly va-

rious.—It has been considered as an enemy by horticulturists, in biting off the buds of fruit-trees; but I am convinced that this accusation has been inconsiderately made, and that the trifling injury occasionally committed by the abrasion of a few flower buds, is more than compensated by the destruction of innumerable larvæ, and eggs of the insect tribe, which are usually deposited in or about those essential parts of fructification; and which, if allowed to proceed through the necessary changes, would effectually check all hope of produce. In winter the Blue-Cap frequently resorts to stack-yards and folds, where it feeds upon grain, chiefly oats, through the husk of which, after having fixed it firmly with its claws, it picks a hole, by repeated strokes of its bill.—It greedily devours carrion, and is a regular attendant upon the wheel attached to a dog-kennel. Like the Greater Titmouse, it will also attack other small birds, sometimes killing them in a similar manner; and is remarkable for its hostility to the Owl, which it follows, and unremittingly persecutes, whenever the latter happens to be in motion during the day.

Nest, &c. It breeds in the holes of trees or walls, and forms its nest of mosses, lined with feathers and hair.—Its eggs, from six to eight in number, (not eighteen or twenty, as mentioned by some authors), are white, spotted with brown at the larger end. The female is not easily to be driven from her nest, and, if an attempt be made to seize her upon it, bites with severity (from which has arisen one of the provincial terms), at the same time ruffling her feathers, hissing and making the spitting noise of an irritated kitten. The call-notes of the Blue Titmouse are confined to a weak chirp, and a kind of harsh chatter.

It is found throughout Europe, and usually in abundance.

PLATE 51. Fig. 2. Natural size.

General description.

Bill bluish-grey. Forehead, band above the eyes, and cheeks, white. Crown of the head Berlin blue. Streak before and behind the eyes black. Nape of the neck,

and collar deep azure blue. Back greyish blue, with a tinge of green. Wings pale Berlin blue, having the greater coverts tipped with white. Tail pale blue. Throat and list down the middle of the belly deep Scotch blue. Breast and sides sulphur-yellow. Legs and toes bluish-grey.

The female resembles the male bird, except that the list down the belly is not so well defined.

MARSH TITMOUSE.

PARUS PALUSTRIS, Linn.

PLATE LI. FIG. 4.

- Parus palustris, *Linn.* Syst. 1. p. 341. 8.—*Gmel.* Syst. 1. p. 1009. sp. 8.—*Lath.* Ind. Ornith. v. 2. p. 565. sp. 9.—*Raii* Syn. p. 73. A. 3.—*Will.* p. 175. t. 43.—*Briss.* 3. p. 555. 7.
 Parus atricapillus, *Gmel.* Syst. 1. p. 1008. sp. 6.—*Lath.* Ind. Ornith. v. 2. p. 566. sp. 10.
 La Nonnette cendrée, *Buff.* Ois. v. 5. p. 403.—*Id.* Pl. Enl. 3. f. 3.
 Le Mesange à tête noir du Canada, *Buff.* Ois. v. 5. p. 408.
 Mesange Nonnette, *Temm.* Man. d'Ornith. v. 1. p. 291.
 Sumpfmeise, *Bechst.* Naturg. Deut. v. 3. p. 874.—*Meyer,* Tasschenb. Deut. v. 1. p. 271.—*Frisch,* t. 13. f. 2. B.
 Marsh Titmouse or Black-Cap, *Br. Zool.* 2. No. 165. t. 57. f. 4.—*Arct. Zool.* 2. p. 427. E.—*Will.* (Ang.) p. 241. t. 43.—*Lath.* Syn. 4. p. 541. 8.—*Mont.* Ornith. Dict. v. 2.—*Lewin's Br. Birds,* 3. t. 119.—*Pult. Cat. Dorset.* p. 10.—*Bewick's Br. Birds,* v. 1. p. t. 242.—*Shaw's Zool.* v. 10. p. 56.
 Canada Titmouse, *Arct. Zool.* 2. No. 328.—*Lath.* Syn. 4. p. 548. 9.

This species, although not so abundant as the preceding one, is very generally dispersed throughout the kingdom.—It inhabits woods and thickets, particularly those that are swampy, and composed of willows, alders, and other brush-wood affecting moist situations.—Here it finds an abundant supply of food, which, during the greater part of the year, Food. consists of insects and their larvae. In winter, however, it will feed upon oats and other seeds, and exhibits no dislike to carrion.—It is seldom seen engaged in search of food upon

the higher trees, like others of its tribe, but confines itself to the underwood, flitting from bush to bush near the ground.—Its usual note is so different as to be easily distinguished from that of all the other species, but in spring some of the notes of the male bird are not unlike those of the Greater Titmouse. It breeds in the holes of old willows, and such trees as occur in its peculiar haunts, and frequently excavates the intended habitation of its brood to a considerable depth, always making it a little wider at the bottom for the reception Nest, &c. of the nest, which is composed of moss, mixed with the *pappus* (or seed-down) of the willow, (and not of thistle-down, as stated by MONTAGU), lined with a warm coating of the same material. The eggs, from six to eight in number, are white, with reddish-brown spots, most numerous towards the larger end.

Like others of the genus, those birds keep together in families during the winter, only separating and pairing on the approach of spring. They are found throughout Europe, and are particularly abundant in Holland. The species appears to be precisely the same in North America.

PLATE 51. Fig. 4. Natural size.

General description.

Head, nape of the neck, and throat, ink-black. Upper parts yellowish-grey. Wings and tail bluish-grey, edged paler. Cheeks yellowish-white. Breast and belly white, tinged with pale yellowish-brown. Legs bluish-grey.

The female does not differ from the male bird.

COLE TITMOUSE.

PARUS ATER, Linn.

PLATE LI. FIG. 3.

Parus ater, Linn. Syst. 1. p. 341.—*Gmel.* Syst. 1. p. 1009. sp. 7.—*Lath.* Syn. Ornith. v. 2. p. 564. 8.—*Raii* Syn. p. 73. A. 2.—*Will.* p. 175. t. 43.
Parus atricapillus, Briss. 3. p. 551. 5.
La Petite Charbonnière, Buff. Ois. v. 5. p. 400.
Mesange petite Charbonnière, Temm. Man. d'Ornith. 1. p. 288.
Tannemeise, Bechst. Naturg. Deut. v. 3. p. 853.—*Meyer,* Tasschenb. Deut. v. 1. p. 268.
Cole-Mouse, Br. Zool. 1. No. 164. t. 57. f. 3.—*Arct. Zool.* 2. No. 327.—*Will.* (Ang.) p. 241. t. 43.—*Lath.* Syn. 4. p. 540. 7.—*Lewin's Br. Birds,* 3. t. 180.—*Mont. Ornith. Dict.*—*Id. Supp.*—*Pult. Cat. Dorset.* p. 10.—*Don,* Br. Birds, 4. t. 79.—*Bewick's Br. Birds,* v. 1. p. t. 241.—*Shaw's Zool.* v. 10. p. 56. t. 6.

THE Cole Titmouse is not so frequently met with as either of the two preceding species in England, where its appearance is confined to woods and extensive plantations.—In Scotland, I have found it abundantly in all the pine forests, which seem to be its appropriate and favourite habitat, to the comparative exclusion of the other species. In these extensive tracts, covered by the natural growth of the country, or planted by the great landed proprietors, it has both a secure retreat and a constant supply of food; consisting of the aphides, larvæ, and others of the insect tribe, that are peculiar to the different species of fir, together with the seeds and berries of various evergreens. It is very lively in all its motions, and rivals the Blue Titmouse in the attitudes it assumes in quest of its prey, amid the higher branches of the pines. Its note is shriller and more pleasing than in the other species, and tends much to break the gloomy solitude of the tracts it frequents. Dr LATHAM (in common with some other writers) appears to have doubted the specific distinction between the *Cole* and *Marsh* Titmouse, and inclines to the opinion that the latter is but the female of the former bird. I am per-

Food.

suaded that this erroneous supposition could only have been entertained by so distinguished a naturalist, from not having had the opportunity of seeing both the species in a living state, or of comparing their respective habits. Their notes, and peculiar markings, differ from the earliest period of age*.

Nest, &c. The nest of the Cole Titmouse is usually built in the cavity of some decayed stump of a tree; but I have sometimes found it placed on the ground, in the entrance of a mouse or mole hole. It is formed of moss and wool, with a lining of hair. The eggs are white, spotted with reddish-brown; and in number from six to eight.

This species occurs throughout Europe, particularly in parts abounding in forests of pine, and other evergreens.

PLATE 51. Fig. 3. Natural size.

General description.

Bill black. Crown of the head, and nape of the neck, black; the latter with a central white spot. Cheeks and sides of the neck white. Throat and under part of the neck black. Back and scapulars greenish-grey, passing upon the rump into yellowish-grey. Wings and tail grey; the coverts of the former tipped with ash-grey. Under parts greyish-white. Legs and toes bluish-grey.

The female resembles the male bird.

* See MONTAGU, who, in the second volume of the Ornith. Dict. has clearly exhibited the distinctive characters of the two species.

LONG-TAILED TITMOUSE.

PARUS CAUDATUS, Linn.

PLATE LI. FIG. 5.

Parus caudatus, Linn. Syst. 1. p. 342. 11.—*Gmel.* Syst. 1. p. 1010. sp. 11.—*Lath.* Ind. Ornith. v. 2. p. 569. sp. 20.—*Raii* Syn. p. 74. A. 5.—*Will.* p. 176. t. 43.

Parus longicaudatus, Briss. 3. p. 570. 13.

Le Mesange à longue queue, *Buff. Ois.* v. 5. p. 437. t. 19.—*Id. Pl. Enl.* 502. f. 3. female.—*Tennin. Man. d'Ornith.* v. 1. p. 296.

Schwantzmeise, *Bechst. Naturg. Deut.* v. 3. p. 879.—*Meyer, Tasschenb.* Deut. v. 1. p. 272.

Staartmees, *Sep. Nederel. Vög.* v. 1. t. p. 49.

Long-tailed Titmouse, *Br. Zool.* 1. No. 166.—*Arct. Zool.* 2. p. 248. 9.—*Will. (Ang.)* p. 242.—*Lath. Syn.* 4. p. 550.—*Id. Supp.* p. 190.—*Albin,* 2. t. 57. fig. 1.—*Lewin's Br. Birds,* 3. t. 121.—*Mont. Ornith. Dict.*—*Walc. Syn.* 2. 249.—*Pult. Cat. Dorset.* p. 10.—*Bewick's Br. Birds,* v. 1. p. 243.—*Shaw's Zool.* 10. p. 59.

PROVINCIAL—Long-tail Mag, Long-tail Pie, Huckmuck, Bottle Tom, Mum-Ruffian.

THIS handsome little species of Titmouse is plentifully dispersed through the kingdom, but from seldom quitting the recesses of its native woods, does not frequently come under the notice of the common observer.—Its food consists entirely of insects, with their eggs and larvæ, for which it is in constant search amongst the branches and foliage of the trees. In this pursuit it displays all the singular attitudes that so particularly distinguish this genus, running up and down the branches with the greatest agility, and hanging in an inverted position from the ends of the small twigs. Like the Blue Titmouse, it will sometimes nip off the buds, in order to arrive at some included larva. Its usual calls are a weak chirp, and a hoarser double note, chiefly used when flitting from one tree to another. Its notes in the spring, however, are more varied, and it can utter a pleasing, though low and short song.—Its nest is a structure of great interest and beauty, and is commonly fixed in one of the smaller forks of

Food.

Nest, &c.

a tree branch; but occasionally amid the closer screen of a fir, or the centre of a thick bush of woodbine or thorn. It is of a longish oval form, composed of different lichens and wool firmly and curiously interwoven, and lined with a profusion of feathers. A small hole is left on two opposite sides of the nest, not only for ingress and egress, but also to prevent the bird, during incubation, from being incommoded by its long tail, which then projects through one of the orifices. The eggs usually amount to ten or twelve, and are white, with fine reddish-brown specks, disposed about the larger end.

The young, after quitting the nest, continue with their parents during the autumn and winter, forming distinct families, which separate early in spring, or as soon as the influence of the pairing-season commences. The flight of this bird, although usually confined to short distances, is very rapid, and has not unaptly been compared to the passage of a dart through the air. It is often seen in company with the Gold-crested Regulus, and the others of its own tribe. Is found throughout Europe, and the colder parts of Asia.

PLATE 51. Fig. 5. Natural size.

General description.

Bill short, and black. Irides brown. Edges of the eyelids yellow. Forehead and crown of the head white. From the bill, passing above each eye, are two streaks of black, which join at the nape of the neck, and then form one broad streak, which runs down the middle of the back. The rest of the back, and the scapulars, are rose-red. Quills black; the secondaries deeply edged with white. Cheeks and throat white, mixed with grey. Under parts ash-grey, tinged with rose-red. Tail cuneated, and very long; the four middle feathers black; the two next tipped with white; the remainder with their outer webs and tips white. Legs and toes brownish-black.

CRESTED TITMOUSE.

PARUS CRISTATUS, Linn.

PLATE XLIII. FIG. 6.

Parus cristatus, Linn. Syst. I. p. 340. 2.—*Gmel.* Syst. I. p. 1005.—*Raii* Syn. p. 74. 6.—*Will.* p. 175. t. 48.—*Lath.* Ind. Ornith. v. 2. p. 567. sp. 14. *Le Mesange huppé, Buff.* Ois. v. 5. p. 447.—*Id.* Pl. Enl. 502. f. 2.—*Temn.* Man. d'Ornith. v. 1. p. 290.
Haubenmeise, Bechst. Naturg. Deut. v. 3. p. 869.—*Meyer,* Tasschenb. Deut. v. 1. p. 270.—*Frisch,* Vög. t. 14. f. 1. B.
Crested Titmouse, *Arct. Zool.* 2. p. 427. F.—*Will.* (Ang.) p. 242. t. 43.—*Lath.* Syn. 4. p. 545. 12.—*Albin.* 2. t. 57.—*Mont.* Ornith. Dict.—*Id.* Sup.—*Don,* Br. Birds, 2. t. 26.—*Wale.* Syn. 2. t. 250.—*Shaw's Zool.* 10. p. 64.

As this species is asserted to be an inhabitant of the pine-forests of Scotland, particularly of that of Glenmore (from whence Dr LATHAM mentions having received a specimen), I have given a figure of the male bird (from which the female only differs in having less black upon the throat) in one of the supplementary plates.

My own endeavours to discover it in its native haunts have been ineffectual, but I readily allow that, in such an extent of gloomy forest, it might have escaped my research, and may be very properly entitled to its place in our Fauna *. It is said to be of very retired habits, and rarely to associate with any of its congeners; which may account for my never having met with it in the company of the Cole Titmouse, a species (as I have before observed) abounding in all the pine-districts of Scotland.—According to TEMMINCK, it builds in the holes Nest, &c. of trees or rocks, and sometimes in the deserted nests of crows or squirrels. It lays from eight to ten eggs, white, with purplish-red spots, principally disposed around the larger end.—Its food consists of insects and their larvæ, to- Food.

* Sir WM. JARDINE informs me that this bird has been found in some plantations not far distant from Glasgow, where it annually breeds.

gether with the berries of the juniper, and other evergreen shrubs.

It is only found in such parts of Europe as afford localities congenial to its habits.

PLATE 43. Fig. 6. Natural size.

General description.

Bill black. Coronal feathers much elongated, and when erected, forming a conical crest; their colour black, deeply margined with white. Cheeks yellowish-white, with a few black specks. Ear-coverts, and streak below the eye, black; behind which is a collar of white, margined by a black line. Chin and throat black. Upper parts pale yellowish-brown, with a tinge of oil-green. Under parts white, tinged with ochreous-yellow, deepest towards the vent. Legs and toes bluish-grey.

BEARDED TITMOUSE.

PARUS BIARMICUS, Linn.

PLATE LI. FIGS. 6.

Parus biarmicus, Linn. Syst. I. p. 342. 12.—*Gmel.* Syst. I. p. 1011.—*Lath.* Ind. Ornith. v. 2. p. 570. sp. 23.

Parus barbatus, Briss. 3. p. 567. 12.

Le Mesange barbe ou moustaché, *Buff.* Ois. v. 5. p. 518. t. 18.—*Id.* Pl. Enl. p. 618. f. 1. and 2.—*Temm.* Man. d'Ornith. v. 1. p. 298.

Bartmeise, *Bechst.* Naturg. Deut. v. 3. p. 888.—*Meyer,* Tasschenb. Deut. v. 1. p. 273.—*Frisch,* Vög. t. 8. f. 2. male.

Baartmees, *Sep.* Nederl, Vög. v. 1. t. p. 85.

Bearded Titmouse, Br. Zool. I. No. 167.—Arct. Zool. 2. No. 248. K.—*Lath.* Syn. 4. p. 552. 2.—*Albin.* t. 48.—*Lewin's Br. Birds,* v. 3. t. 122.—*Mont. Ornith. Dict.*—*Id. Sup.*—*Wale.* Syn. 2. t. 148.—*Bewick's Br. Birds,* v. 1. p. t. 246. male.—*Shaw's Zool.* 10. p. 62. t. 7. copy from Bewick.

THE habits of this beautiful bird cause it to be very partially distributed, and it has only hitherto been met with in some peculiar situations, chiefly in the southern part of the kingdom. It lives amongst the reeds that fringe the banks of some of our rivers, and that form a considerable portion of

the herbage of the fenny districts of our island.—It has been found in the marshes between Erith and London, in some parts of Gloucestershire, as well as in the extensive marshy tracts near Cowbit in Lancashire; and MONTAGU mentions having killed it near Winchelsea in Sussex, amongst the reeds which there grow close to the sea-shore. I have not met with it in the more northern counties, nor in any part of Scotland, although constantly inquired after in all such places as were likely to afford it an appropriate retreat. From the difficult situations in which it resides, its history in this country is but little known, and the nest has not yet been found, or at least has not been distinguished from that of the Reed-Wren, which inhabits the same places *. TEMMINCK tells us, that the nest is affixed to the stems of the reeds, and always placed beyond the reach of the highest floods, but he does not mention the materials of which it is formed. We also learn from him, that it lays six or eight reddish-white eggs, spotted with reddish-brown, principally disposed around the larger end. It is dispersed throughout the greater part of Europe, in its peculiar localities, and is, as might be expected, particularly abundant in Holland. It is also found in Asia, upon the marshy borders of the Caspian Sea.

Its food consists of aquatic insects and their larvæ; with the seeds of such plants and grasses as affect moist situations.

PLATE 51. Fig. 6. Natural size.

Bill orange-yellow. Irides bright gamboge-yellow. Between the bill and eyes is a tuft of loose pendent black feathers on each side, forming moustaches. Head, neck, and breast fine bluish-grey; the latter with a tinge of

General descrip-
tion.

* Since the publication of the first Edition, the nest has been repeatedly met with, and I have now by me one that was obtained in Essex. It is formed entirely of the smaller seed-bearing stems of the reed, and is placed in the tufts of grass that grow in marshy situations. The eggs are four or five, with a pinkish tinge, and with irregular specks, spots, and fine streaks of brown disposed over the whole surface.

lilac-purple. Chin and throat ash-grey. Belly and flanks yellowish-brown. Under tail-coverts black. Nape of the neck and the back yellowish-brown, tinged with orange. Scapulars wood-brown. Greater quills blackish-grey, having their outer webs edged with white. Secondaries edged with orange-brown. Tail long and wedge-shaped, orange-brown ; the exterior feathers having their outer webs and tips pale reddish-white. Legs and toes black.

The female has the lengthened feathers (forming the moustaches), the chin, breast, and sides of the neck, white, with a tinge of pink. Crown of the head wood-brown ; the occiput spotted with black. Back yellowish-brown, with a list of black spots down the middle. Vent, and under tail-coverts, pale yellowish, or inclining to wood-brown.

GENUS ACCENTOR, BECHST. ACCENTOR.

GENERIC CHARACTERS.

BILL strong, straight, of mean length, and drawn to a fine point ; the tomia of both mandibles bending slightly inwards ; and the upper mandible emarginated. Nostrils basal, naked, and pierced in a large membrane. Legs strong. Toes three before and one behind ; the outer one joined at its base to the middle toe. Wings having the first quill very short, and the second a little shorter than the third, which is the longest.

The few members of this genus are birds of a hardy temperament, and brave without difficulty the rigours of our sharpest winters. Their food is seeds of various kinds, with insects and worms. The two sexes differ but little in plumage, and their moult appears to be simple.

ALPINE ACCENTOR.

ACCENTOR ALPINUS, Bechst.

PLATE D. FIG. 3.

Accentor alpinus, Bechst. Naturg. Deut. 3. 700. No. 1.—Temm. Man. d'Orn. 1. 248.—Jardine and Selby's Illust. Orn. pl. 68.

Motacilla alpina, Gmel. Syst. 1. 957.

Sturnus moritanicus, Gmel. Syst. 1. 804.—Lath. Ind. Orn. 1. 325. No. 11.

Sturnus collaris, Gmel. Syst. 1. 805.—Lath. Ind. Orn. 1. 323. sp. 5.

La Fauvette des Alpes, Buff. Ois. 5. 156. t. 10.

Collared Stare, Lath. Syn. 3. 8. 5.

Alpine Warbler, Lath. Syn. 4. 434. 25.

I AM enabled to add the present species to the list of our Fauna as an occasional visitant, from a specimen having been killed in the garden of King's College, Cambridge, and which is now in the possession of the Rev. Dr THACKERY, the Provost, whose valuable collection of British birds it enriches; and it is through his courtesy, in accommodating me with the loan of this individual, that I am enabled to present my subscribers with a correct figure of a British-killed Alpine Accentor. In form and general appearance, it resembles our indigenous species, the Hedge-Accentor (*Accentor modularis*), but exceeds it considerably in size, and differs in the disposition and colours of its plumage. It is an inhabitant of the mountainous regions of Europe, and particularly affects those districts which are of an abrupt and rocky character. Upon the Swiss Alps it is very common (as its name implies), and may always be seen by travellers in the environs of the Convent upon Mount St Bernard. In summer it ascends to very elevated stations, where it breeds in holes, and under ledges of the rocks, laying four or five eggs of a fine greenish-blue colour. As winter advances, and the snow begins to accumulate upon the rocky steeps, it descends towards the valleys and middle regions of the mountains; where it subsists upon the seeds of alpine grasses and plants; which at this time constitute its principal support. In summer, however, in addition to its vegetable diet, it destroys grasshoppers and other insects, and their larvæ.

Nest, &c.

General description.

PLATE D. Fig. 3. Represents this bird of the natural size.

Bill strong, straight, and fine-pointed; the upper mandible brownish-black; the lower one orange-yellow, except the tip, which is black. Head, nape of the neck, rump, and breast pale hair-brown, tinged with grey. Back the same; with the centres of the feathers blackish-brown. Scapulars and tertaries deeply margined with pale reddish-brown. Lesser and greater wing-coverts black: each feather being terminated by a triangular white spot. Quills hair-brown, tipped and margined with greyish-white, margined with yellowish-white. Flanks and abdomen orange-brown, margined with yellowish-white. Tail hair-brown; the exterior feathers terminating in a large reddish-white spot upon their inner webs. Legs and feet strong, pale reddish-brown; hind claw very strong, and much arched.

HEDGE-ACCENTOR.

ACCENTOR MODULARIS, Cuv.

PLATE XLIII*. FIG. 4.

Accentor modularis, *Cuv.* Reg. Anim. I. 368.

Motacilla modularis, *Linn.* Syst. I. p. 329. 3.—*Gmel.* Syst. I. p. 952. sp. 3.

Sylvia modularis, *Lath.* Ind. Ornith. v. 2. p. 511. sp. 13.

Curruca sepiaria, *Briss.* 3. p. 394. 12.

Le Mouchet, Traine Buisson, ou Fauvette d'Hiver, *Buff.* Ois. v. 5. p. 151.
Id. Pl. Enl. 615. f. 1.

Fauvette de Bois, ou Rousette, *Buff.* Ois. v. 5. p. 139.

Accenteur Mouchet, *Temm.* Man. d'Ornith. v. 1. p. 249.

Schiefer Brustiger Sanger, *Meyer*, Tasschenb. Deut. v. I. p. 245.—*Frisch*, t. 21. f. 2. B.

De Winter Zanger, *Sep.* Nederl. Vög. v. 4. t. p. 404.

Hedge-Sparrow, Br. Zool. I. No. 150.—Arct. Zool. 2. p. 418. H.—*Will.* (Ang.) p. 215.—*Albin*, 8. t. 59.—*Lath.* Syn. 4. p. 419. 9.—*Mont.* Ornith. Dict.—*Lewin's Br. Birds*, 3. t. 102.—*Pult. Cat. Dorset*. p. 9.—*Walc.* Syn. 2. t. 232.

The Winter Fauvette, *Bewick's Br. Birds*, I. p. 213.

PROVINCIAL—Dick-Dunnock, Titling, Foolish Sparrow.

THE Hedge-Accentor (more generally known by the name of the *Hedge-Sparrow*) is a very abundant species through-

out the kingdom, and is also a permanent resident here. It is only known in France during the winter, and its range does not extend below that latitude. It draws to the neighbourhood of villages or farm-houses for refuge during the severity of the winter's season, procuring its subsistence about the doors, or gleaning from the produce of the stack-yards, which then form its chief supply.

The male begins his song very early in the year; and these birds usually pair in the beginning of February, after which they retire to the woods, and other situations more remote from the habitation of man.—The nest is, in most years, Nest, &c. finished in March; is formed of moss and wool intermingled, with a lining of hair, and is well secluded from sight in some thick evergreen, whin-bush, or closely trimmed hedge. The eggs, four or five in number, are of a fine clear greenish-blue.

During summer this bird feeds upon insects, worms, and Food. the seeds of grasses and other plants, as they ripen throughout the season.—It pours forth by no means a contemptible song, the notes possessing variety, sweetness, and depth of tone; and the early period of the year, at which it usually commences, renders it doubly acceptable. It appears from MONTAGU, that, in the south of England, the nest of this bird is frequently chosen by the Cuckoo as the depository for its egg.

PLATE 43*. Fig. 4. Natural size.

Top of the head grey, streaked with brown. Sides of the General neck, throat, and breast bluish-grey. Back and wing descriptio- coverts yellowish-brown; the centre of each feather n. being liver-brown. Middle wing-coverts tipped with white on their outer webs. Rump and flanks yellowish-brown. Belly greyish-white. Lower tail-coverts brown, bordered with white. Legs and toes deep yellowish-brown; strong.

The female is similar in plumage to the male bird.

SUBFAMILY MOTACILLINA.

WE now enter upon the subfamily Motacillina, which forms the fifth group of the Sylviadæ, and completes the circle of that extensive family. The birds belonging to LATHAM's genus *Motacilla*, or Wagtail proper, are its typical representatives; in addition to which it contains many other forms, and amongst these the *Pipits* (genus *Anthus*, BECHST.), a group which leads immediately to the *Larks* (genus *Alauda*, Auct.), thus connecting this portion of the Sylviadæ with the *Conirostral* tribe. The connection of the present with the preceding subfamily *Pariana*, is supported by SWAINSON's genus *Sciurus*, which partakes in an almost equal degree of the characters belonging to members of each group. The *Wagtails* are birds of slender and elegant form, and are very active. They seek their food upon the ground, where they run with great agility, and do not hop like the other Warblers; but are equally able to perch and sit upon trees. Their food consists of insects, worms, and larvæ. They nestle upon the ground, or on the ledges of rocks, in the holes of walls, &c.

GENUS MOTACILLA, LATH. WAGTAIL.

GENERIC CHARACTERS.

BILL slender, strait, subulated, carinated, emarginated, and describing an angle upon the forehead. Tomia of both mandibles slightly compressed inwards, about the middle of the bill. Forehead low and depressed. Nostrils basal, lateral, oval, and partly concealed by a naked membrane. Tarsus considerably longer than the middle toe. Toes three before and one behind; the outer being joined at its base to the middle one. Hind claw strong, more or less curved, and

sometimes of considerable length. Wings having the first quill very short; the second the longest in the wing; and one of the scapulars being as long as the quills. Tail very long, and generally square at the end.

The members of this well-marked genus are very active birds; and haunt the banks of rivulets, the pebbled margins of rivers, and extensive meadows in the neighbourhood of water. Their progressive motion is by *running*. They feed on insects, taken both on the ground and on wing; also on worms and larvæ. They are subject to a *double* (that is, autumnal and vernal) moult; the latter of which changes the colour of the neck, and, in some species, the head of the bird. They are confined to the Old Continent.

The lengthened tail of this genus is kept in continual motion perpendicularly, accompanied by a lateral (or horizontal) expansion of the feathers.

PIED WAGTAIL.

MOTACILLA ALBA, Linn.

PLATE XLIX. FIG. 1.

Motacilla alba, Linn. Syst. 1. p. 331. 11.—*Gmel.* Syst. 1. p. 960. sp. 11.—*Lath.* Ind. Ornith. v. 2. p. 501. sp. 1. and var. B. and Y.—*Raii* Syn. p. 75. A. 1.—*Will.* p. 171. t. 42.—*Briss.* 3. p. 461. 38.

La Lavandière, Buff. Ois. v. 5. p. 251. t. 14. f. 1.—*Id.* Pl. Enl. 652. f. 1. male in spring plumage.

Bergeronette grise, Temm. Man. d'Ornith. v. 1. p. 255.

Weise Bachstelze, Meyer, Tasschenb. Deut. v. 1. p. 216.—*Id.* Vög. Deut. Heft. 3. male, female, and young.

White Wagtail, Br. Zool. 1. No. 142. t. 55.—Arct. Zool. 2. p. 396. B.—*Will.* (Ang.) p. 237.—*Lath.* Syn. 4. p. 395. 1.—*Id.* Sup. p. 178.—*Lewin's* Br. Birds, 3. t. 95.—*Walc.* Syn. 2. t. 226.—*Mont.* Ornith. Dict.—*Pult.* Cat. Dorset. p. 8.—*Bewick's* Br. Birds, t. p. 194.—*Shaw's* Zool. v. 10. p. 545.

PROVINCIAL—Pied Wagtail, Black and White Wagtail, Dishwasher, Washer-woman.

THIS lively bird is well known, and very generally distributed throughout Great Britain, being found, during its po-

lar migration, as far to the northward as the Orkney Islands.

—In the southern counties of England it is indigenous, remaining through the whole year; but in the northern parts it is regularly migratory, retiring southward about the middle of October, and not re-appearing till February or the beginning of March.—It frequents the open margins of rivers and lakes, or meadows in the immediate vicinity of water; and is partial to closely-mown lands.—It runs with celerity, and is in continual motion in pursuit of the insects that fly near the surface, which it also catches by short turns of flight just above the ground, with singular dexterity. In addition to the perfect insects, it feeds upon their larvæ, and upon worms. Its usual note-call is not unpleasant, and its more extensive song (as in the pairing-season it warbles, the early harbinger of spring, from the roof of a house, or the top of a wall) is worthy of attention. It builds in various situations,—in a heap of stones, upon the ground, in the crevice of a stone-quarry, or hole in a wall; and not unfrequently, in the south of England, upon the top of the trunk of an old pollard tree.

Nest, &c. The nest is composed of moss, fibres of root and grass, intermixed with wool, and lined with hair; in which it lays four or five eggs, of a greyish-white, speckled with light hair-brown, and inferior in size to those of the next species. They resemble so nearly the egg of the Cuckoo, as to induce her frequently to select the nest of this bird for the purposes I have before detailed.

The flight of the Wagtail is interrupted, and performed by jerks; whilst on wing its call is very frequently repeated. In autumn, previous to the departure of these birds to more southern counties, they collect in small flocks, and haunt the pasture-lands near the streams, or pools of water.

PLATE 49. Fig. 1. Male bird in summer plumage, and of the natural size.

Forehead, cheeks, sides of the neck, belly, and vent white. General
 Crown of the head, nape of the neck, throat, breast, upper
 parts of the body, and middle tail-feathers black.
 Lesser wing-coverts black; the greater ones bordered
 with white. Quills edged with greyish-white. The two
 outer tail-feathers white.—In autumn and winter the
 black upon the throat and breast gives place to pure
 white, and the upper parts also incline to blackish-grey;
 rendering the male bird, at this season of the year,
 scarcely distinguishable from the female.

descrip-
tion.

GREY WAGTAIL.

MOTACILLA BOARULA, Linn.

PLATE XLIX. FIG. 2.

Motacilla Boarula, Linn. Syst. p. 527.—*Gmel.* Syst. 1. p. 997. sp. 5.—*Lath.* Ind. Ornith. 2. p. 502. 4.

Motacilla melanopa, Gmel. Syst. 997.—*Lath.* Ind. Ornith. v. 2. 503. sp. 5.

Motacilla cinerea, an flava altera Aldrov. *Raii* Syn. p. 75. 3.—*Will.* p. 172.

Le Bergeronnette jaune, Buff. Ois. v. 5. p. 268.—*Id.* Pl. Enl. 28. f. 1. young female.—*Temm.* Man. d'Ornith. v. 1. p. 257.

Motacilla sulphurea, Bechst. Naturg. Deut. v. 3. p. 459.

Yellow Wagtail, *Albin.* 2. t. 58.

Grey Wagtail, Br. Zool. 1. No. 144.—*Will.* (Ang.) p. 238.—*Lath.* Syn. 4.

p. 398. 4.—*Id.* Supp. p. 178.—*Mont.* Ornith. Dict.—*Id.* Supp.—*Lewin's*

Br. Birds, 3. t. 95.—*Edw.* t. 259.—*Walc.* Syn. 2. t. 227.—*Pult.* Cat. Dor-set. p. 8.—*Bewick's* Br. Birds, v. 1. p. 190.

PROVINCIAL—Winter Wagtail.

WITH all the activity and sprightliness that characterize the preceding species, the present bird unites a finer turn of form, and more graceful carriage; and also exhibits a more varied and handsome arrangement of colours.—It is only Periodical visitant. known as a winter or equatorial migrant in the southern counties of England,* whilst in the northern parts of the kingdom, on the contrary, it is a regular summer visitant, arriving in April, and retiring, with few exceptions, about the end of September, or the beginning of the following

* See MONT. Ornith. Dict. article *Wagtail, grey.*

month. Previous to its departure, it assembles in small flocks or families, which haunt the meadows or bare pastures ; and, at this time, having acquired their winter's plumage, the young and adults closely resemble each other.—In the north Food. of England, and in Scotland, this bird resorts to the margins of clear streams, where it feeds upon the various aquatic insects and their larvae. It is very nimble, running rapidly, and frequently wading to the feathered part of the leg in the shallow streams, in pursuit of its prey. It commences nidification very soon after its arrival ; the place selected for that purpose being usually the stony bank, or a shelf of the rocky precipice that so often borders our northern rivers. The Nest, &c. nest is made of moss and dry grasses, lined with hair ; and the eggs, commonly six in number, are of a yellowish-grey, blotched by a darker shade of the same colour. The Grey Wagtail produces two broods in the year ; the first of which is in general fledged by the end of May. MONTAGU, in his account of this bird, has very properly rectified the mistake of preceding authors, in asserting that the *black* throat, during the pairing season, is confined to the male. I have invariably found the female to possess it also at that period ; but of inferior lustre to that of the other sex. Its usual call is shriller than in the other species. It displays great anxiety when its eggs, or the newly-flown young, are disturbed, and is very vociferous if a hawk, or other enemy, approaches the neighbourhood of the nest.

PLATE 49. Fig. 2. Male bird, in summer plumage, and of the natural size.

General description.

Head and upper parts of the body bluish-grey. Rump bright sulphur-yellow. Above the eyes is a white streak. Throat black. Under parts bright gamboge-yellow. Wings greyish-black, the coverts tipped with white. Tail four inches long ; with the outer feather entirely white ; the second white, except part of the outer web, which is black ; the third having an additional streak of

black on the edge of the inner web ; and the remaining feathers black, margined near the base with sulphur-yellow.—In autumn the black upon the throat disappears, and is succeeded by yellowish-white ; and the belly becomes of a pale primrose-yellow. The colours of the female, at both seasons, are not so bright as those of the male bird.

YELLOW WAGTAIL.

MOTACILLA FLAVA, Linn.

PLATE XLIX. FIG. 3.

Motacilla flava, Linn. Syst. I. p. 331. 12.—*Lath.* Ind. Ornith. v. 2. p. 504. sp. 8.—*Gmel.* Syst. I. p. 963.

Motacilla verna, Briss. 3. p. 468. 40.

Motacilla chrysogastra, Bechst. Naturg. Deut. v. 3. p. 446.

Bergeronette de Printemps, Buff. Ois. v. 5. p. 265. t. 14. f. 1.—*Id.* Pl. Enl. 674. f. 2.

Bergeronette printaniere, Temm. Man. d'Ornith. v. 1. p. 260.

Belge Bachstelze, Meyer, Tasschenb. Deut. v. 1. p. 219.—*Id.* Vog. Deut. Heft. 10. the male and female.

Geele Kwikstaart, Sep. Nedrel. Vög. v. 2. p. 103.

Yellow Wagtail, Br. Zool. I. No. 143.—Arct. Zool. 2. p. 396. F.—Will. (Ang.) p. 238. t. 68.—Edw. t. 258.—Lewin's Br. Birds, 3. t. 97.—*Lath.* Syn. 4. p. 400. 6.—*Id.* Sup. p. 179.—*Mont.* Ornith. Dict.—*Id.* Supp.—*Pult.* Cat. Dorset. p. 8.—*Bewick's* Br. Birds, v. 1. t. p. 198.

PROVINCIAL—Spring or Summer Wagtail, Oat-seed Bird.

THIS is a migratory species, its appearance in spring being Periodical visitant. usually about the end of March ; and as it frequently resorts, on its first arrival, to the newly sown lands, it has obtained in many districts the provincial name of the *Oat-seed Bird*. It is not so generally diffused as either of the other species, but adheres to particular districts, viz. open arable ground, and extensive upland sheep pastures. It is not uncommon in the western parts of the county of Northumberland, but of rare occurrence upon the sea-coast. These birds collect in small flocks after the breeding-season, and move southwards about the end of August ; after remaining there for a short

time, they leave the kingdom in September, to seek a warmer
 Nest &c. residence for the winter.—The Yellow Wagtail builds upon
 the ground, forming a nest of dry stalks and root-fibres,
 lined with hair. The eggs are four or five in number, of a
 pale wood-brown, spotted with the same colour of a darker
 shade. In its habits it resembles its congeners, and its usual
 call is not unlike that of the *Pied Wagtail*, but rather shril-
 ler. Like them, it feeds upon insects and worms. It ap-
 pears to be subject to the vernal moult, as its colours, during
 the pairing season, are of a much brighter hue than when it
 leaves us in autumn, after having undergone the regular
 moult; at which time the adult and young birds are not to
 be distinguished.

Food. This species differs from the preceding ones, in having
 the hind claw much produced, and nearly straight, in this
 respect approaching closely to the succeeding genus *Anthus*.
 It would seem that many authors have confounded this spe-
 cies with the Grey Wagtail, as they have mentioned it as
 indigenous.* The superior length of tail of the Grey Wag-
 tail, its ash-coloured back, and the want of the produced hind
 claw, will always prove sufficient tokens of distinction.

PLATE 49. Fig. 3. A male bird, of the natural size.

General
descrip-
tion.

Crown of the head, nape of the neck, and ear-coverts, pale
 wax-yellow. Back, rump, and scapulars, a darker shade
 of the same colour. Over the eyes is a streak of gam-
 boge-yellow. Wing-coverts blackish-brown, margined
 and tipped with yellowish-white. Quills blackish-brown,
 margined and tipped as above. Middle tail-feathers
 margined with wax-yellow; the two outer ones, with
 the whole of their exterior and part of their inner webs
 white. Legs and toes blackish-brown. Hind claw pro-
 duced, and but slightly curved. The female has the

* See WHITE's Nat. Hist. Selb. p. 38, who says, " Wagtails, both white and yellow, remain with us all winter."

upper parts of the body darker, and more inclining to oil-green; throat yellowish-white; and the yellow of the belly of a less vivid hue than in the male bird.

GENUS ANTHUS, BECHST. PIPIT.

GENERIC CHARACTERS.

BILL straight, slender, rather subulated towards the point, having the base of the upper mandible carinated, and the tip slightly bent downwards, and emarginated. Tomia of both mandibles compressed inwards about the middle. Nostrils basal, lateral, and oval, partly concealed by a membrane. Feet, with the tarsus generally exceeding the middle toe in length; toes three before, and one behind, and with the outer toe adhering to the middle one as far as the first joint; hind claw more or less produced. Wings having the first quill very short, and the second rather shorter than the third and fourth, which are of equal length, and the longest in each wing. Two of the scapulars produced, and equal to the quills in length, when the wing is closed.

It is but lately that this genus has been separated by BECHSTEIN and TEMMINCK from that of *Alauda*, in which it was included by the earlier systematists, and where, from inattention to its more direct affinities, it had been unaccountably allowed to remain by succeeding ornithologists.

In the conical form of the head, and general characters of the bill and legs, as well as in a striking similarity of manners, the birds of this genus show their immediate connexion with the *Wagtails*. Their food is of the same nature, viz. insects and worms. They build upon the ground, and appear subject to a trifling change of plumage in the spring, confined principally to the region of the head and throat.

ROCK, OR SHORE PIPIT.

ANTHUS AQUATICUS, Bechst.

PLATE XLIX. FIG. 6.

- Anthus aquaticus, Bechst.* Naturg. Deut. v. 3. p. 745.
Anthus rupestris, Nils. Orn. Suec. v. 1. p. 245. sp. 115.
Alauda campestris spinoleetta, Gmel. Syst. 1. p. 79. sp. 4. var. B.—*Lath.*
 Ind. Ornith. v. 2. p. 495. sp. 12. var. B.
Alauda petrosa, Trans. Linn. Soc. v. 4. p. 41.
Alauda obscura, Gmel. Syst. 1. p. 801. sp. 33.—*Lath.* Ind. Ornith. v. 2.
 p. 494. sp. 7.
Pipit Spioncelle, Temm. Man d'Ornith. v. 1. p. 265.
Wasser Pieper, Meyer, Tasschenb. Deut. v. 1. p. 258.
Dusky Lark, Lewin's Br. Birds, 3. t. 94.—*Don.* Br. Birds, 4. t. 76.
Rock Lark, Mont. Ornith. Dict.
Sea Lark, Wals. Syn. t. 193.
Field or Rock Lark, Bewick's Sup. to Br. Birds, p. t. 26.

THIS species appears to have remained long either unnoticed, or confounded with others, by the earlier ornithologists. Mr LEWIN, in his work on British Birds, first gave a figure and description of it, by the name of the *Dusky Lark*, which was adopted by him at the suggestion of MONTAGU, who seems to have been the first observer of its distinctive characters, amongst a number of Larks and Pipits sent to him by Dr LATHAM. It afterwards appeared in the “Index Ornithologicus,” under the title of *Alauda obscura*; and MONTAGU gave an accurate description and history of it, in the Linnean Transactions, as well as in the Ornithological Dictionary, under the head of *Rock Lark*. Its peculiar localities contributed doubtless to its remaining so long unnoticed, for it is strictly confined to the rocky and abrupt shores of our island. In these situations it is not rare, as I have found it along the whole extent of the Northumbrian coast and the eastern shores of Scotland; and MONTAGU met with it abundantly in Wales, and on the southern shores of England. In its manners it resembles the Common Pipit; and their call-note and song are also similar to each other.

It breeds very early, building in the clefts and on ledges of the rocks.—The nest is composed of bent and marine plants, Nest, &c. lined with fine grass, and sometimes with hair. It lays four or five eggs, of a pale yellowish-grey colour, with reddish-brown spots, almost confluent at the larger end.—It feeds Food. on the smaller marine insects and worms. It is constantly resident with us, and may be found at all seasons upon the coast; nor does it ever appear to congregate or remove inland, even during winter, or in the severest storms.

PLATE 49. Fig. 6. Natural size.

Bill dusky, with the upper mandible yellowish. Above General description. the eye is a yellowish-white streak. Head oil-green, tinged with brown; back and rump oil-green, tinged with brown; on the former, the shafts of the feathers being a little darker. Lesser and greater wing-coverts dusky, edged with pale oil-green; quills the same; tail dusky; the outer web, and part of the inner one of the exterior feather, of a dirty or greenish-white. Throat yellowish-white. Sides of the neck and breast greenish-white, with brown streaks. Sides and thighs the same. Belly yellowish-white, with a few dark brown streaks. Legs brown. Hind claw curved, and three-eighth parts of an inch in length.

The female is very similar to the male bird in appearance.

MEADOW PIPIT, OR TIT.

ANTHUS PRATENSIS, Bechst.

PLATE XLIX. FIG. 4.

- Anthus pratensis, Bechst.* Naturg. Deut. v. 3. p. 732. t. 36. f. 2.
Alauda pratensis, Lath. Ind. Ornith. v. 2. p. 49. 3. sp. 5.—*Linn.* Syst. 1. p. 287. 2.—*Gmel.* Syst. 1. p. 792.—*Raii* Syn. p. 69. A. 3.—*Will.* p. 150.—*Briss.* 3. p. 343. 3.
Sipiola altera Aldrov., *Raii* Syn. p. 80. 4.—*Will.* p. 153. 171.
Alauda campestris, Lath. Ind. Ornith. v. 2. p. 495. 12.
Le Cujelier, Buff. Pl. Enl. 660. f. 2.
L'Alouette de Pres, Buff. v. 5. p. 31. t. 3.
Pepit Farlouse, *Temm.* Man. d'Ornith. v. 1. p. 269.
Wiesenpieper, Meyer, Tasschenb. Deut. v. 1. p. 255.—*Frisch*, t. 16. f. 2. A.
Tit-Lark, Br. Zool. I. No. 133.—*Arct. Zool.* 2. p. 395.—*Albin*, t. 43.—*Will.* (Ang.) p. 110.—*Lewin's Br. Birds*, 3. t. 98.—*Lath.* Syn. 4. p. 374. 5.
Walc. Syn. 2. t. 191.—*Mont.* Ornith. Dict.—*Id.* Supp. and App. to Sup.—*Pult.* Cat. Dorset. p. 8.—*Low's Fau.* Orcad. p. 67.—*Bewick's Br. Birds*, 1. p. 185.—*Shaw's Zool.* v. 10. p. 540.
Pipit Lark, Mont. Ornith. Dict.—*Shaw's Zool.* v. 10. p. 542.
Meadow Lark, Lath. Syn. 4. p. 378. 10.—*Shaw's Zool.* v. 10. p. 539.

PROVINCIAL—Grey Cheaper, Titling.

THIS bird is of common occurrence, being very generally distributed throughout these kingdoms, inhabiting the mountainous and heathy parts of the country, as well as the meadows and marshes of the lower districts. It is abundant on the elevated tracts of Northumberland and the barren heaths of the Highlands of Scotland, and, as MONTAGU observes, is one of the few birds met with in such exposed situations. These birds remain with us through the whole year, but many of them change their quarters during the winter, according to the severity of the season. In September and October, after their autumnal or general moult, they assemble in small flocks, resorting to the lower pastures, and not unfrequently to turnip-fields. At this period, the renewed plumage differs considerably from that laid aside, the oil-green of the upper parts being of a much brighter tint, and the whole of the under parts more deeply tinged with yellow. In this state, the present species is to be recognised

as the *Pipit Lark*, considered by some authors as a distinct species. MONTAGU, in the first volume of his Ornithological Dictionary, describes it as such under the above title; but afterwards, in his Appendix to the Supplement, upon more mature investigation, corrects himself, and asserts his conviction of their identity. I have omitted no opportunity of becoming satisfied on this head, having examined specimens at all seasons of the year, and am thoroughly persuaded that the supposed species described as the *Pipit Lark*, is in reality no more than the Common Pipit (*Tit-Lark* of authors) in its renewed or winter plumage. Its usual flight is by short and interrupted jerks; but in the breeding season it differs, the bird then rising by a tremulous and rapid motion of the wings to a considerable height in the air, and commencing its song when at the greatest elevation, descending afterwards with motionless wing and expanded tail, in a sloping (sometimes almost perpendicular) direction to the earth, or to the top of some bush.—It makes its nest on the ground, under Nest, &c. the shelter of a tuft of herbage, forming it of dry grass, interwoven with the seed-stalks of plants, and lined with finer grasses, or with hair. The eggs are five or six in number, varying in colour, but the prevailing tint a pale brown, thickly covered with brownish purple-red spots and specks. Like the Wagtails, it runs with celerity, and feeds upon flies, worms, and other insects. Its common note-call is a short chirp, resembling the word *sneek* frequently repeated. In Northumberland, I have observed that the Cuckoo almost invariably deposits her egg in the nest of this bird, scarcely a year elapsing without instances of this fact falling under my observation. This is perhaps the result of locality, being on the border of the open heathy country, where the present species is abundant, and where the Cuckoos, during their cursory residence, chiefly resort, attracted, in all probability, by the plentiful supply of lepidopterous larvae to be found in such situations.

Food.

PLATE 49. Fig. 4. Natural size.

General description.

Upper parts dark oil-green, with the centres of the feathers brownish-black. Under parts yellowish-white, spotted with blackish-brown upon the sides of the neck and breast. Flanks white, with large oblong dark streaks. Tail blackish-brown, the outer feather having its exterior web white, and also terminating with a large white spot. On the second feather of the tail is a small white spot near the tip.—During the breeding season, the throat of the male bird assumes a pale reddish-brown colour. After the autumnal moult, the plumage is of a bright oil-green, and the under parts of a deeper yellowish-white, or sienna-yellow.

The female and young bird are similar to the male in the autumnal plumage.

TREE PIPIT.

ANTHUS ARBOREUS, Bechst.

PLATE XLIX. FIG. 5.

Anthus arboreus, Bechst. Naturg. Deut. v. 3. p. 706. t. 36. f. 1.

Alauda trivialis, Linn. Syst. 1. p. 288. 5.—*Gmel.* Syst. 1. p. 796.—*Lath.* Ind. Ornith. v. 2. p. 493. 6. but not the synonyms.

Alauda minor, Lath. Ind. Ornith. v. 2. p. 494. sp. 8.—*Gmel.* Syst. 1. p. 793.

Pepit des Buissons, Temm. Man. d'Ornith. v. 1. p. 271.

L'Alouette Pipi, Gerard. Tab. Flem. v. 1. p. 246.—*Buff.* Pl. Enl. 660. f. 1. the male.

Baumpieper, Meyer, Tasschenb. Deut. v. 1. p. 254. B.—*Frisch.* t. 16. f. 1. B.

Field Lark, Br. Zool. v. 130.—*Arct. Zool.* 2. p. 395. D.—*Lewin's Br.* Birds, 3. t. 92.—*Lath.* Syn. 4. p. 375. 6.—*Mont. Ornith. Dict.*—*Id. Supp.*

—*Wale.* Syn. 2. p. 192—*Bewick's Br. Birds,* 1. p. 180.

Lesser Field Lark, Will. (Ang.) p. 207.

The Lesser Field Lark or Tree Lark, *Bewick,* Supp. p. t. 28.

The Grasshopper Lark, *Bewick's Br. Birds,* v. 1. p. 181. but confounding with it the habits and description of the Grasshopper Warbler, as noted by White in his *Hist. Selb.*

ALTHOUGH rather superior in dimensions, the Tree Pipit is so like the Meadow Pipit in plumage, as to have been very

frequently confounded with it. The short and hooked hind claw, however, of the species now under consideration, will always prove a sufficient mark of distinction. The bill also is rather stronger, and more dilated at the base.

It is a migratory species, and a summer visitant with us; Periodical visitant. arriving about the first week in May, in the northern counties, and departing on its equatorial migration in September. During its abode here, it inhabits the borders of woods in the arable districts, and is never found upon the moors or extensive downs, where the Meadow Pipit is always most abundant. It is pretty generally, though but thinly, scattered through the cultivated parts of the island. Like most of our summer visitants, the arrival of the male bird precedes that of the other sex by a week or ten days.—As soon as a proper situation is found, he commences his song of invitation, which, though possessing some similarity of note to those of the two preceding species, is very superior to them in compass, variety, and sweetness. This he pours forth from the top of a tree, or on wing, as slowly descending to the spot from whence he had previously risen. During his ascent he never sings, producing only a twittering note, similar to the word *Tsee*, frequently repeated, till he arrives at his highest elevation; then he commences together his song and his descent, which is performed with motionless and widely extended wings; the tail at the same time being expanded and thrown perpendicularly upwards. MONTAGU very correctly observes, that this bird rarely alights upon the ground, without previously perching on a tree, and that it also commences its flight from a tree, after leaving the ground.

It builds its nest under the shelter of a large tuft, or a small bush; this is composed of moss, fibres of root, and withered grasses, lined with fine dry grass, and horse-hair. The eggs, four or five in number, are of a greyish-white, sprinkled all over with brownish purple-red specks.

Like the others of its genus, it runs and walks upon the

Food. ground with ease, feeding upon insects and worms. The *Lesser Crested Lark* of ALDROVANDUS, and of succeeding writers, appears to be but the present species; and BEWICK's descriptions of the *Field Lark*, *Tree Lark*, and *Grasshopper Lark*, in the first volume of his "British Birds," seem only referable to the same individual.

PLATE 49. Fig. 5. Natural size.

General description.

The whole of the upper parts of the plumage deep oil-green; the feathers upon the head, and those of the upper part of the back having their centres brownish-black. Wing-coverts margined with yellowish-white, and forming a double transverse bar across the wings. Chin and throat white, passing into pale sienna-yellow upon the sides of the breast. Upper parts of the breast having oblong spots of brown. Sides and flanks spotted with brown. Middle of the belly, and the under tail-coverts greyish-white; sometimes tinged with pale sienna-yellow. Tail having the two middle feathers pointed, of a brown colour, tinged with oil-green; the exterior feather, with the whole of the outer, and the greater part of the inner web white, and with the tip of the second feather also white. Legs and toes yellowish-brown. Hind claw short and curved.

The female is similar to the male bird.

RICHARD'S PIPIT.

ANTHUS RICHARDI, Vieill.

PLATE C. FIG. 5.

Anthus Richardi, Vieillot, Temm. Man. d'Orn. 1. 263.
Corydalla Richardi, Vigors in Zool. Jour. 2. 397.
Fepit Richard, Temm. Man. 2. 263.

THE capture of two or three specimens in the southern parts of Britain, within the last few years, (and subsequent

to the publication of the first edition of this work,) entitles this species to be included in the list of our fauna as an occasional visitant. In size it is superior to any of the other previously described species, and appears to connect them more immediately with the *Larks*, and the genus *Megalurus* of HORSFIELD; on which account it has, by MR VIGORS, been made the type of a genus which he names *Corydalla*, in his "Arrangement of the Genera of Birds." But as the characters upon which this is founded, are in no essential particular distinct from those which characterize the other members of the present genus, (the strength of bill and length of the tarsus, and hinder claw, being only in accordance with its superior dimensions), I have left it where it was first appropriately placed by VIEILLOT and TEMMINCK.

Its habits and manners are stated to be similar to those of the other species. It is generally seen upon the ground, where it runs with great rapidity in pursuit of flies, grass-^{Food.} hoppers, and other insects; and, like the Wagtails and other members of this subfamily, is in the frequent habit of raising and depressing its tail, accompanied at the same time by a lateral expansion of the feathers.

It is met with in the warmer parts of Western Europe, but not numerously; and is supposed to be a native of Northern Africa. *Alauda Lusitana* of LATHAM, as far as can be judged from his very brief description, appears referable to this species.

PLATE C. Fig. 5. Represents this bird of the natural size, from a specimen formerly belonging to MR VIGORS, and now in the Museum of the Zoological Society.

Bill having the upper mandible brown; and the lower one (except the tip) sienna-yellow. Crown of the head, and hind part of the neck, deep-brown; the feathers being margined with yellowish-brown. Eye-streak and chin yellowish-white. Throat yellowish-white, surrounded by a gorget composed of lanceolated brown spots.

Breast yellowish-brown, with oblong dark-brown spots. Belly and abdomen white, with a tinge of wood-brown. Flanks yellowish-brown. Back, wing-coverts, and scapulars, blackish-brown ; the feathers being deeply edged with yellowish-brown, and having a slight tinge of oil-green. The middle feathers of the tail deep-brown, with paler edges ; the outer feather on each side almost entirely white ; and the next to it having the anterior part white ; the shaft and basal part black. Tail extending nearly two inches beyond the tips of the closed wings. Legs and feet yellowish-brown ; the tarsi long and stout ; hind claw much produced, and slightly curved.

FAMILY V. AMPELIDÆ.

THE Ampelidæ, or Fruit-eaters, which form the fifth primary division of the *Dentirostral Inscssores*, are distinguished by a short bill, attended with an extensive gape, enabling them to swallow in an entire state the large berries and fruits that constitute their support. In all the typical genera the setæ, or those hairs which protect the mouth of the Laniadæ and other *Insectivorous* groups, are wanting, and it is only in such aberrant forms as lead to the Flycatchers and Warblers, that we detect the partial acquisition of the rictal bristles. These are strictly *insecatorial* or perching birds, and are never seen upon the ground ; consequently their legs and feet are short, the latter being well adapted for grasping the branches of trees, by the toes being more or less united at the base, and the soles broad and scabrous. The typical subdivisions of the family are those of Ampelina and Pibrina, the former embracing the birds belonging to the genus *Ampelis* (LINN.) as now restricted, *Cassmorynchus* (TEMM.), &c. ; and the latter those of *Pipra* (LINN.), *Rupi-*

cola (BRISS.), *Calyptomena* (RAFFLES), &c. To the aberrant subdivisions (the limits of which have not yet been strictly defined) belong, amongst others, the genera *Procnias* (HOFFMAN), *Phibalura* (VIEILL.), *Bombycilla* (BRISS.) *Vireo* (VIEILL.), *Liothrix* (SWAINS.), and *Pachycephala* (SWAINS.). With the exception of the genera *Bombycilla*, *Liothrix*, *Pachycephala*, and *Pardalotus*, the whole of the present family is restricted to the New World; the typical genera inhabiting the warmer parts of South America, where they find, in the thick and extensive forests, a never failing supply of those fruits and berries upon which they subsist. In Europe only one form belonging to this family is known, viz. the Wax-Wing (*Bombycilla garrula*), which, from its occasional visits, is entitled to rank as a British bird.

GENUS BOMBYCILLA, BRISS. WAX-WING.

GENERIC CHARACTERS.

BILL strong, short, and strait, broad at the base; the gape wide; the upper mandible slightly bent at the tip, and emarginated. Nostrils basal, ovoid, and open, concealed by closely set feathers directed forwards. Wings long; the second quill feather being the longest; and the first longer than the third. Secondary quills having their tips ornamented with a wax-like appendage. Feet with three toes before, and one behind; the outer and inner toes joined at their base to the middle one. Tarsus shorter than the middle toe. Sole broad. Claws sharp, and curved.

The Wax-Wings were considered by BRISSON (with that judgment he so eminently displayed) as generally distinct from the true chatteringers (genus *Ampelis* of LINNÆUS and LATHAM), though both these systematists allowed them to remain confounded together, in defiance of their distinct separating characters. By TEMMINCK, also, they have been

considered a distinct group, to which he gave the new name of *Bombycivora*; but losing sight of their natural station from real affinities, instead of placing the genus in connection with the *Ampelidæ*, he arranged it in his order *Omnivores*, associated with birds widely separated both in affinity and by habits.

The genus now before us contains at present but two species, viz. the *B. garrula* (Bohemian Wax-Wing) and *B. Carolina* (Carolina Wax-Wing), a native of North America. It is closely connected in affinity with the genera *Phibalura* and *Procnias*.

BOHEMIAN WAX-WING.

BOMBYCILLA GARRULA, Bonap.

PLATE XXXIV*.

- Bombycilla garrula*, Bonap. Amer. Ornith. Northern Zool. 2. 237. No. 61.
Bombycivora garrula, Temm. Man. d'Ornith. v. 1. p. 124.
Bombycilla Bohemica, Briss. Ornith. v. p. 333.
Ampelis garrulus, Linn. Syst. 1. p. 297. 1.—*Gmel.* Syst. 1. p. 836. sp. 1.—
Lath. Ind. Ornith. v. 1. p. 363.
Le Jaseur, Buff. Ois. v. 3. 429. t. 26.—*Id.* Pl. Enl. 261.
Grand Jaseur, Temm. Man. d'Ornith. 1. p. 124.
Garrulus Bohemicus, Rait Syn. p. 85. A.
Rothlich grauerseidenschwanz, Meyer, Tasschenb. Deut. v. 1. p. 204.
Bohemian Chatterer, Br. Zool. 1. No. 112. t. 48.—*Lath.* Syn. 3. p. 91. 1.—
Mont. Ornith. Dict.—*Lewin's* Br. Birds, 2. t. 65.—*Bewick's* Br. Birds.—
Don, Br. Birds. 1. t. 11.—*Pult.* Cat. Dorset. p. 11.
European Chatterer, Northern Zool. 2. 237. No. 61.

Rare visitant.

THE Wax-Wing is a rare visitant in England, seen only at long and uncertain intervals.

In the winter of 1810, large flocks were dispersed through various parts of the kingdom; and, from that period, it does not seem to have visited our island till the month of February 1822, when a few came under my inspection, and several were observed during the severe storm, in the winter of 1823*. Upon the Continent its residences are subject to

* In the winter of 1827, Wax-Wings again visited our island.

similar uncertainty; very little is known of its particular habits, and the place of its nidification was long a matter of doubt, but it has been since ascertained to inhabit the elevated and mountainous regions of Asia, and to breed there. It has lately been discovered also in North America by Dr RICHARDSON and Mr DRUMMOND near the sources of the Athabasca, and at Great Bear Lake in latitude 65° , but has never been seen to the south of the 55th parallel of latitude. The former writer (in the "Northern Zoology"), states, that it appears in large flocks at Great Bear Lake about the 26th of May, where it remains but a few days, feeding upon the berries of the Alpine Arbutus, Marsh Vaccinium, &c. that had been frozen, and covered with snow during the winter. He adds, that he has reason to believe it retires in the breeding season to the rugged and secluded mountainous limestone districts, in the 68th and 69th parallels, where it subsists upon the berries of the common juniper.

When with us, it generally associates in flocks, feeding upon the berries of the mountain-ash (*Sorbus Aucuparia*), thorn (*Crataegus oxyacantha*), &c. It is an elegant bird, with regard both to form and plumage. The Carolina Wax-Wing, considered by LATHAM to be merely a variety of this, is now acknowledged as a distinct species, being much inferior in size, and shewing a radical difference of colour in various parts of the plumage.

Food.

PLATE 34*. Represents a male and female of this species in the natural size.

Bill black, inclining to yellowish-white at the base. Nos- General
trils covered with small black feathers. Irides purplish- description.
red. The region of the eyes, chin, and throat, velvet-
black. Forehead brownish-red. Head-feathers elong-
ated, silky and loose in texture, and forming a pendent
crest, of a greyish-brown, tinged with purplish-red.
Neck, breast, and upper part of the back purplish-red,
inclining to broccoli-brown, with a greyish cast. Lesser

wing-coverts the same colour, but a shade darker. Greater coverts black, tipped with white. Primary quills black, with a bright spot of king's yellow near the tips of their outer webs, which are white. Secondaries grey, tipped with white on the outer web, and having flat red cartilaginous appendages (similar in appearance to *sealing-wax*) attached to the ends of seven or eight of them. Lower part of the back and rump smoke-grey, with a purplish tinge. Tail black, tipped with king's yellow. Breast and belly pale purplish-grey. Vent and under tail-coverts orange-brown, inclining to reddish-orange. Tarsi, toes, and claws black. The female is similar to the male bird, with the exception of the wax-like appendages not being either so large or numerous; and the yellow upon the wings and ends of the tail-feathers not being so bright.

TRIBE III. CONIROSTRES, *Cuv.*

THIS tribe, which forms the 3d and a typical division of the order *Insessores*, contains the greater part of the Conirostres of CUVIER, and the whole of the birds comprised in the two orders of M. TEMMINCK, named "*Omnivores*" and "*Granivores*." Its characteristics may be stated as residing in the strength and conical form of the bill, the cutting margins of which are commonly entire. By Messrs VIGORS and SWAINSON, the *Corvidæ* and *Sturnidæ* are considered as forming its typical families, being distinguished by a more perfect general conformation, or rather, an organization adapted to a more varied mode of life than that of the others. These two groups are for the most part *Omnivorous*, and possess equal facility of moving upon the ground and perching on trees. The other families, on the contrary, are restricted to a diet on grain or fruits, and have their legs and feet more peculiarly adapted for perching, or in some few instances,

for running upon the even surface of the earth, as exemplified in the Larks (genus *Alauda*).

By Mr VIGORS, the five primary divisions of this tribe are considered to be the families *Fringillidæ*, *Sturnidæ*, *Corvidæ*, *Buceridæ*, and *Loxiadæ*. Mr SWAINSON, however, adopts an arrangement rather different, considering *Loxiadæ* and *Fringillidæ* of VIGORS as forming but one family, and making his fifth to consist of the *Musophagidæ* (or plantain-eater), &c., which birds were left by Mr VIGORS as a constituent part of the scensorial tribe. With this disposition of Mr SWAINSON's I feel inclined to agree, as I think the direct characteristics of the *Musophagidæ* are more immediately and intimately in accordance with the rest of the Conirostral groups, than with those of the *Scansorial*, to which latter tribe that family nevertheless leads the way, thus forming a link in the chain of connection.

FAMILY I. FRINGILLIDÆ.

THIS family, with which we commence the circle of the tribe, embraces all the numerous forms and genera commonly known by the name of *Finches* (or *hard-billed birds*.) They are distinguished from the more typical divisions by their inferior size, and by their short, strong, thick, and perfectly conical-shaped bill. In the aberrant forms, as might be expected, these peculiar characteristics become modified, so as to render them the mediums of connection with the other groups, families, and orders. By Mr SWAINSON, the five subordinate circles of this family are thus enumerated, *Coccothraustina* and *Tanagrina*, constituting the nominal or typical groups; and *Alaudina*, *Fringillina*, and *Pyrrhulina*, the aberrant. Of the second subfamily here mentioned, the British Islands cannot produce any specimen.

SUBFAMILY ALAUDINA.

FROM the Pipits (genus *Anthus*) belonging to the family *Sylviadæ* of the *Dentirostral tribe*, we pass by an easy gradation, and a marked affinity to the true Larks (genus *Alauda*), which, from their habits and structure, become a constituent group of the Fringillidæ, and the typical representatives of the present subfamily. Associated with them are the thicker billed Larks, which lead the way to the genus *Plectrophanes* (MEYER), typified by *Emberiza nivalis* (of authors), in which the bill assumes nearly the form of that of the true Buntings, which latter birds again conduct us by minute gradations of form and character to the Finches, or succeeding subfamily *Fringillina*.

GENUS ALAUDA, LINN. LARK.

GENERIC CHARACTERS.

BILL subconic, short, having the mandibles of equal length, and the upper one slightly convex. Nostrils basal, lateral, and oval, partly concealed by small reflected feathers. Feet, with three toes before, and one behind; the anterior ones being entirely divided; and the claw of the hind toe much produced, and nearly straight. Wings, with the first quill very short, or wanting, and the third the longest. Tertiaries, in most instances, shorter than the quills. Coronal feathers generally produced, and capable of being erected.

The members of this genus are inhabitants of the open fields, or plains. Their food principally consists of grain and different seeds, but they do not refuse the occasional supply of worms or other insects. Their progressive motion is by walking or running; and they are amongst the birds that have been styled *Pulverators*, which delight in rolling them-

selves in the dust. They sing during their perpendicular ascent in the air; and make their nests upon the ground. They are easily distinguished from the Pipits, or Lark-like warblers, by the form of the head, and by the conical bill, as well as by other essential characters; and they differ from these last as much in their peculiar habits.

SKY-LARK.

ALAUDA ARVENSIS, Linn.

PLATE I. FIG. 1.

Alauda arvensis, *Linn.* Syst. p. 287. 1.—*Gmel.* Syst. 1. p. 791. sp. 1.—*Lath.* Ind. Ornith. 2. p. 491. 1.

Alauda vulgaris, *Raii* Syn. p. 69. A. 1.—*Will.* p. 149. t. 40. *Briss.* 3. p. 335. 1.

L'Alouette ordinaire, *Buff.* Ois. v. 5. p. 1. t. 1.—*Id.* Pl. Enl. 363. f. 1.

Alouette des Champs, *Temm.* Man. d'Ornith. v. 1. p. 281.

Feld Lerche, *Bechst.* Naturg. Deut. v. 3. p. 755.—*Meyer,* Tasschenb. Deut. v. 1. 260.—*Frisch.* t. 15. f. 1.

Sky Lark, *Br. Zool.* 1. No. 136.—*Arct. Zool.* 2. p. 394. A.—*Lewin's Br. Birds*, 3. t. 89.—*Lath.* Syn. 4. p. 368. 1.—*Ab.* 1. t. 41.—*Walc.* Syn. t. 189.—*Pult. Cat.* Dorset. p. 77.—*Low's Fauna Orcad.* p. 65.—*Bewick's Br. Birds*, v. 1. p. t. 178.

Common Field or Sky-Lark, *Will.* (Angl.) p. 203.

PROVINCIAL—Lavrock.

THIS well known and delightful songster is very generally distributed throughout all the cultivated parts of Great Britain. The situations most favourable to its increase seem to be the more open and uninclosed arable lands; as it is seldom observed to frequent, in any numbers, moors or extensive commons, far removed from the cultivated districts. Its geographical distribution embraces the whole of Europe within the temperate zone, many parts of Asia, and the north of Africa.

The song of the Lark possesses great variety of inflection, and many of the notes are sweetly modulated. There is also a wildness of expression in it, which, in connection with the

height from whence it comes, and a bright and cloudless morning, produces a striking effect.

It sings as it rises perpendicularly in a spiral direction, and frequently reaches to such a height as to become invisible. Its descent is usually oblique, but it sometimes drops perpendicularly, and with great rapidity, from its aerial station. It commences its song of invitation early in the spring, at which time, and during the greater part of the summer, it continues to enliven our fields with its notes of joy, from the first dawn of morning, and at intervals through the day. It constructs its nest about the latter part of April, or the beginning of May, and its first brood is, in general, fully fledged by the end of June. A second family is usually produced, which is able to fly in August.—The nest, composed of different vegetable stalks, and lined with fine dry grasses, is placed upon the ground amongst the corn or herbage ; and contains four or five eggs, of a greenish-white colour, spotted with clove or purplish-brown.

Upon the approach of winter, Larks begin to collect in immense flocks, quitting the more elevated parts of the country, where they were dispersed during the breeding season, and resorting to the coasts and more southern cultivated districts of our island. At this season they are fat ; and being considered a delicacy, are in consequence taken in great quantities, by nets and other devices. From the neighbourhood of Dunstable, vast numbers are annually sent to the London market, where, at the present period, they produce from 3s. to 4s. per dozen.—The food of the Lark consists of grain and other seeds ; but, in the summer, it also obtains insects and worms. It walks and runs with facility, and does not use the hopping motion.—Its flight is easy and undulating, and is very unlike that of the Pipits, which were, till lately, associated with this genus. It is reared in confinement without much difficulty, and sings almost throughout the year. A piece of fresh turf is usually placed in the cage, and occasionally renewed, on which it takes

Food.

its station, and from whence it pours forth its melodious song.

PLATE 50. Fig. 1. Natural size.

Bill brownish-black, with the base of the lower mandible ochreous-yellow. The feathers upon the crown rather elongated, and capable of being erected at pleasure; their colour brownish-black, margined with pale yellowish-brown. Hind part of the head pale broccoli-brown. Upper parts of the body yellowish-brown, with the centers of the feathers darker. Above the eye is a yellowish-white streak. Cheeks pale yellowish-brown. Breast pale wood-brown, spotted with brownish-black; the middle white, with a reddish-brown tinge. Tail brown, the outer feather having the tip and exterior web white; the next with the outer web only white. Legs yellowish-brown; paler in young specimens. Claws wood-brown; the hind claw very long, and slightly curved.

General Description.

The female is similar to the male bird.

The young, previous to the first moult, have the black and brown shades of their upper plumage more distinct and deeper than the adults.

WOOD-LARK.

ALAUDA ARBOREA, Linn.

PLATE L. FIG. 2.

- Alauda arborea, Linn.* Syst. Nat. 1. p. 297. 3.—*Gmel.* Syst. 2. p. 793.—*Lath.* Ind. Ornith. v. 2. p. 492. sp. 3.—*Raii* Syn. p. 69. A. 2.—*Will.* p. 149. t. 40.—*Briss.* 3. p. 340. t. 20. f. 1
Alauda nemorosa, Gmel. Syst. 1. p. 797. sp. 21.
Alauda cristatella, Lath. Ind. Ornith. v. 2. p. 499. sp. 36.
Le Lulu, l'Alouette des Bois, ou le Cujelier, Buff. Ois. v. 5. p. 74. and v. 5. p. 25.—*Id.* Pl. Enl. v. 503.
Alouette Lulu, Temm. Man. d'Ornith. v. 1. p. 282.
Baumlerche, Bechst. Naturg. Deut. v. 3. p. 781.
Walddlerche, Meyer, Tasschenb. v. 1. p. 262.
Wood-Lark, Br. Zool. No. 137.—*Arct. Zool.* 2. p. 395. B.—*Will.* (Angl.) p. 204.—*Lewin's Br. Birds*, 3. t. 90.—*Lath.* Syn. 4. p. 371. 3.—*Albin.* 1. t. 42.—*Pult.* Cat. Dorset. p. 8.—*Walc.* Syn. 2. t. 190.—*Mont.* Ornith. Dict. v. 1.—*Bewick's Br. Birds*, v. 1. p. t. 183.—*Shaw's Zool.* v. 10. p. 506. t 47.

THE Wood-Lark is, with us, by no means an abundant species ; it is confined to the southern and western parts of England ; and, according to MONTAGU, is most numerous in Devonshire *.—This bird is a delightful songster, surpassing the Sky-Lark in the melodious richness, though not in the variety of its notes.—Its song is generally poured forth on wing ; but it differs from the preceding in describing its flight in widely extended circles, and will thus continue in the air for a whole hour, singing without intermission.

It sometimes also utters its song from the branch of a decayed tree, but rarely upon the ground. It frequents cultivated lands and corn-fields, feeding upon grain, various seeds, insects, and worms.—It breeds very early, and eggs Food. Nest, &c. have frequently been found in its nest in the beginning of April.—This is placed on the ground, under the shelter of a tuft of grass or low shrub ; and is formed of dry grasses and stalks, lined with finer materials of the same kind, and usually with a few hairs intermixed.

* A fine specimen of the Wood-Lark was killed near Twizell, on the 24th of November 1827.

The eggs are four or five in number, of a pale wood-brown colour, marked with blotches of grey and brown. These birds do not congregate in flocks during the winter, like the preceding species, but seem to remain in families during that period, seldom being observed in a greater number than from five to seven together.

They are found throughout the greater part of Europe, and extend as far to the northward as Sweden and Russia; in these places they are migratory, but continue stationary in the more southern parts of the Continent. If the weather is favourable, they begin to sing very soon after Christmas.

PLATE 50. Fig. 2. Natural size.

Bill brownish-black, with the base of the lower mandible yellowish-white. Irides brown. Above the eyes is a ^{General description.} yellowish-white streak, better defined than that of the Sky-Lark. Ear-coverts yellowish-brown. Cheeks yellowish-white. Feathers upon the crown of the head long, brownish-black, edged with pale yellowish-brown. Upper parts the same, but the feathers not so triangular in shape as those of the Sky-Lark. Lower parts pale straw-yellow, spotted upon the neck and breast with black. Wing-coverts tipped with white. Tail shorter than that of the Sky-Lark; the two middle feathers brown, the outer ones black, with white tips. Legs flesh-red, with a tinge of yellowish-brown. Hind claw very long, and nearly straight.

The female resembles the male bird.

GENUS PLECTROPHANES, MEYER.

LARK BUNTING.

GENERIC CHARACTERS.

Bill short, thick, conical ; culmen rounded ; tip compressed. Base of the upper mandible extending upon the forehead, and forming an angle. Tomia of both mandibles slightly bending inwards ; gape forming an angle. Upper mandible smaller than the lower one, with a round palatal knob. Nostrils basal, oval, nearly hidden from view by incumbent small plumes. Wings long, acuminate ; the first and second quills of nearly equal length, and the longest in the wing. Legs having the tarsi of mean length. Front toes divided ; and the side ones of nearly equal length. Hind toe strong ; with the claw produced, and nearly straight.

The Snow-Flake (*Emberiza nivalis* of authors) was first separated from the true Buntings by MEYER, in accordance with the variation of character exhibited in the form of the bill, wings, and feet ; as well as the decided difference observable in its economy and habits. Two other species have since been added to it, viz. *Plect. Lapponica* (SELBY), formerly known as *Fringilla lapponica* (LATHAM) ; and *Plectroph. Picta*, a new species from North America, described in the second volume of " Northern Zoology."

In the form of the bill, these birds make a near approach to the Buntings, but that organ is comparatively shorter, the cutting edges scarcely so much intracted, and the palatal knob rounder and less prominent. The wings are also better calculated for extensive flight, being long and acuminate, and having the first quill feather the longest instead of the third. Their feet also are formed like those of the Larks, adapted for running upon the ground, and not for perching ; and the hind claw, as in those birds also, is long

and nearly strait. Partaking in this manner of the characters both of the Larks and Buntings, they hold an intermediate station, and form the bond of connection or passage from one genus to the other. They are natives of the Arctic Regions, and during the breeding season retire to very high latitudes; the Snow-Flake (*Plect. nivalis*) having been met with upon Melville Island, and other regions around the Pole. The second section of TEMMINCK's genus *Emberiza*, ("Bruants Eperonniers") answers to that now before us.

SNOW-BUNTING.

PLECTROPHANES NIVALIS, Meyer.

PLATE LII. FIG. 7.

Plectrophanes nivalis, Faun. Amer. Boreal. 2. 246. No. 65.

Emberiza nivalis, Linn. Syst. 1. p. 308. 1.—*Fau. Suec.* No. 227. t. 1.

Bruant de neige, Temm. Man. d'Ornith. v. 1. p. 319.

Emberiza nivalis, Gmel. Syst. 1. p. 866. sp. 1.—*Lath. Ind. Ornith.* 1. p. 397. sp. 1.

L'Ortolan de neige, Buff. Ois. v. 4. p. 329.—*Id. Pl. Enl.* 497. f. 1.

Schneeammer, Bechst. Naturg. Deut. v. 3. p. 305.—Meyer, Tasschenb. Deut. v. 1. p. 186.—*Id. Vög. Deut. v. 1. t. Heft.* 12. f. 1. old male.

Snow-Bunting, Br. Zool. 1. No. 122. t. 50.—Arct. Zool. 2. No. 222.—*Edw. t. 126.* old male.—*Lath. Syn.* 3. p. 161.—*Id. Sup.* p. 157.—*Lewin's Br. Birds*, 2. t. 71.—*Mont. Ornith. Dict.* v. 1.—*Id. Sup.*—*Bewick's Br. Birds*, v. 1. p. 148.—*Shaw's Zool.* v. 9. 341. t. 54.

Syn. of Adult
Male in sum-
mer's plu-
mage.

Emberiza glacialis, Lath. Ind. Ornith. v. 1. p. 398. sp. 2.

Emberiza mustelina, Gmel. Syst. 2. p. 867. sp. 7.

Montifringilla calcaribus alaudæ, major, Raii Syn. p. 88. A.—Will. p. 187. t. 77.

Great pied Mountain Finch, Will. (Ang.) p. 255.

Tawny Bunting, Br Zool. 1. No. 121.—*Lewin's Br. Birds*, 2. t. 72.—*Lath. Syn.* 3. p. 164. 2.—*Mont. Ornith. Dict.* v. 1.—*Id. App. Shaw's Zool.* v. 9. p. 344.

Syn. of young
Males and old
Females in
winter plu-
mage.

Ortolan de passage, Buff. Ois. v. 4. p. 323.

Emberiza montana, Gmel. Syst. 1. p. 867. sp. 25.—*Lath. Ind. Ornith.* v. 1. p. 398. sp. 3.

Lesser Mountain Finch, and Bramlin, Will. (Ang.) p. 255.

Der Bergammer, Bechst. Tasschenb. Deut v. 3. p. 314. t. 10.—Meyer, Vög. Deut. v. 1. t. f. 2, and 3.

Syn. of
Young of the
year.

Mountain Bunting, Lath. Syn. v. 3. p. 165. sp. 3.—*Mont. Dict. Ornith.*—*Id. Supp.*—*Shaw's Zool.* v. 9. p. 346.

Tawny Bunting, Bewick's Br. Birds, v. 1. p. t. 150.

IT is only after patient scrutiny, and a long course of observation, that I have ventured to bring the synonyms of the *Snow*, *Tawny*, and *Mountain* Bunting under the same head, and to consider them as belonging to one species, varying only in colour and markings from a difference of age or sex, or from the effect of season. In this view, I am happy in possessing the powerful support of Mons. TEMMINCK, who, both as a scientific and practical naturalist, has laboured so effectually in correcting the mistakes, and illustrating the doubts that had long involved the history of many species.

I am aware, that not a few authors, and, amongst the rest Mr MONTAGU, (whose excellent works have contributed so essentially towards a correct knowledge of British Ornithology), hold a different opinion. But, if we examine into the real ground of the evidence upon which they admit a specific distinction between these birds, we shall find it to rest merely upon the difference of colour or markings,—a difference so generally found to prevail between the young and adult, and the male and female of the feathered tribe. The appearance of the Snow-Bunting, in any of its changes, is rare in the southern part of the kingdom, and few ornithologists, therefore, have enjoyed opportunities of seeing it frequently in a living and wild state, and of witnessing its habits and manners; circumstances so essential towards forming a correct judgment, where difference of plumage exists, either between the sexes, or between the young and old birds. MONTAGU indeed confesses, that the Snow-Flake never came under his observation in Devonshire, and the Tawny Bunting but seldom. In Northumberland, on the contrary, it rarely happens that the three varieties are not annually to be met with, during the winter months; and I have neglected no opportunity for observation on their economy; the result of which is evident in the opinion I have here assumed. Their habits and modes of action are precisely similar, they utter the same notes, and no difference is perceptible in their anatomical structure; to which

may be added, that, amongst the numbers I have killed, regular gradations of change from one state to the other have repeatedly occurred.

These birds generally arrive in the upland or mountainous districts about the middle or latter part of October in large flocks, which seem chiefly to consist of the young of the year (or *Mountain-Buntings*), and of females or young males (the *Tawny Buntings*), with a few adult males intermixed, which, at this period, having scarcely acquired their winter's livery, are in consequence nearer to the state of the Tawny plumage. Afterwards, if the season should be severe, small flocks are seen, principally consisting of adult male birds, in their winter's dress, but never in such numbers as are those in the two first-mentioned states. It appears to me, that the same causes which operate upon the Chaffinches in the northern parts of Britain, leading to a separation of the sexes, and a farther equatorial movement of the females, also act upon the species now under consideration; and which would satisfactorily account for the circumstance of the Tawny and Mountain-Bunting having been met with at various times in the south of England, but the Snow-Flake very rarely.

As the severity of the winter increases, they leave the heaths, where they have fed upon the seeds of various grasses, and, descending to the lower grounds, frequent the oat-stubbles; and, if the snow lies deep, they approximate to the coasts, where the influence of the sea-breeze soon exposes a sufficient breadth of ground to afford them subsistence. Their call-note is pleasing, and often repeated during their flight, which is always in a very compact body; and frequently, before settling on the ground, they make sudden wheels, coming almost in collision with each other, at which time a peculiar guttural note is produced. They run with ease and celerity, like the Lark genus, and never perch on trees.

They leave us on the first approach of spring for more northern regions, and advance by degrees within the Arctic

Circle, in which latitude they breed; and these migrations are found to extend to the coasts of the Polar Sea, to the extreme latitudes that our navigators have as yet visited.—The Nest, &c. nest is built in the fissures of rocks, and is said to be lined with the downy fur of the arctic fox *. The eggs, generally five, are of a greenish-white, with numerous specks of umber brown round the thicker end, and streaks of ash-grey, or subdued lavender-purple disposed over the rest of the surface.

PLATE 52. Fig. 7. A male bird, in winter plumage, and answering to the description of the *Tawny Bunting*. Natural size.

General
descrip.
tion.

Male bird.
Winter
Plumage.

Bill pale saffron-yellow; the tip black. Crown of the head white, with the points of the feathers chestnut-brown. Hind part of the head pale yellowish-brown. Ear coverts tipped with the same colour. Under parts white, with more or less yellowish-brown upon the breast. Feathers of the back black, deeply edged with greyish-white, or pale yellowish-brown. Lower part of the back and the rump white. Wing-coverts and secondaries white; but in the younger birds black, edged with white. Greater quills black, edged with white. Two outer tail-feathers white, with a small black spot near their tips; the rest black, edged with white. Legs and toes black. Hind claw produced, and nearly straight.

Summer
Plumage.

In the summer plumage, the head, neck, and all the under parts of the male bird, are pure white; the back being black. In which state it is called the *Snow Bunting*, or *Snow-Flake*.

* Dr RICHARDSON says the nest is composed of dry grass, lined with deer's hair, and a few feathers; the lining, however, will depend upon the materials afforded by situation.—Captain LYON found a nest of this bird placed in the bosom of the corpse of an Eskimaux child, on Southampton Island, in the parallel of 62°; one of the most southerly breeding stations of the species in North America.

The plumage of the females resembles that of the males Female. in their winter's dress, but with more of the yellowish-brown upon the region of the head, and the under parts. The young of the year have the crown of the head yellowish-brown ; the ear-coverts, throat, and large pectoral band chestnut-brown ; and the nape of the neck yellowish-grey. Flanks pale orange-coloured-brown. Feathers of the back very deeply edged with wood and yellowish browns. Wings with four or five of the secondaries white ; the rest black, edged with white and yellowish-brown. This appears to be the *Mountain-Bunting* of authors.

LAPLAND LARK-BUNTING.

PLECTROPHANES LAPONICA, Selby.

PLATE C. FIG. 6.

Plectrophanes Lapponica, *Selby* in Trans. Linn. Soc. 15. 156. pl. 1.—Faun. Amer. Boreal. 2. 248. No. 66.

Fringilla Lapponica, *Linn.* 1. 317. 1.—*Lath.* Ind. Orn. 1. 440.

Fringilla montana, *Briss.* 3. 160.

Fringilla calcarata, *Pall. It.* 2. 710. No. 20. E.

Emberiza calcarata, *Tem. Man. d'Orn.* 1. 322.

Le Grand Montain, *Buff. Ois.* 4. 134.

Bruant montain, *Tem. Man. d'Orn.* 1. 322.

Lapland Finch, *Arct. Zool.* 2. No. 259.—*Lath. Syn.* 3. 263.

Lapland Longspur, *Bonap. Orn.* 1. 53. pl. 13. f. 1. and 2.

Lapland Bunting, *Northern Zool.* 2. 248. No. 66. pl. 48. male.

THE figure given of this species upon one of the supplementary plates, is from an individual that was found some years ago in Leaden Hall market, amongst some Larks, sent up to London from Cambridgeshire, and which specimen is now preserved in the collection of the Zoological Society. A second, caught alive in the neighbourhood of Brighton, was kept caged for some months as a variety of Lark, and after death passed into the hands of Mr YARRELL of Ryder Street, in whose collection it remains. Both of these were

Rare visi-
tant.

young or immaturated birds ; and no instance of the capture of the adult male, distinguished by a marked and well contrasted plumage, has yet come to my knowledge. By Dr LATHAM and others, this species was placed in the genus *Fringilla* of LINNÆUS, although it possesses all the characteristic features of the *Snow Bunting*, which, in the "Index Ornithologicus" of the former author, stands at the head of the genus *Emberiza*. TEMMINCK, however, was aware of its true affinity, and accordingly, in his "Manuel," it ranks as a second species of his section "*Bruant éperonniers*."

In its habits, this bird resembles the preceding one, and, like it, is also an inhabitant of the Arctic Regions. In North America, it winters on the coast of Hudson's Bay, and is also supposed by Dr RICHARDSON to frequent, during the same period, the borders of Lakes Huron and Superior ; but rarely advances to the southward of that parallel. Early in spring it again moves northward, and during summer visits very high latitudes, breeding in the marshy meadows upon the shores of the Arctic Seas.

Nest, &c. The nest, Dr RICHARDSON observes, "is placed upon a small hillock, among moss and stones, and is composed externally of the dry stems of grass, interwoven to a considerable thickness, and lined very neatly and compactly with deer's hair." The eggs are usually seven in number, of a pale ochre-yellow, spotted with brown. In Europe it inhabits Lapland and other boreal regions ; and during winter the young sometimes extend their southerly migrations as far as Switzerland. In other more temperate parts of the Continent it is (as in Britain) only known as an occasional visitant.

Food.

It feeds upon the seeds of various grasses, as well as those of the alpine fruits, as the *Arbutus alpina*, &c.

PLATE C. Fig. 6. Represents this bird of the natural size.

General description. Bill yellowish-brown, palest towards the base of the under mandible. Head, and all the upper parts of the body,

pale wood-brown, tinged with yellowish-grey ; the shafts of the feathers being blackish-brown. Greater wing-coverts, and secondary quills, blackish-brown, deeply margined with chestnut-brown ; the tips being white. Quills dusky, with paler edges. Above the eyes is a broad streak of pale wood-brown. Cheeks and ear-coverts wood-brown ; the latter mixed with black. From the corners of the under mandible, on each side of the throat, is a streak of blackish-brown. Throat yellowish-white. Lower part of the neck and breast sullied white, with numerous dusky spots. Belly and vent white. Flanks with oblong dusky streaks. Tail dusky ; the exterior feathers having the outer web, and half of the inner one, sullied white ; the next to it with a small wedge-shaped white spot near the tip. Legs and toes brown. Claws not much curved ; the hind one nearly strait, and longer than the toe.

The following is the description of the adult male, as given in the *Northern Zoology*.

“ Head, chin, throat, and upper part of the breast, velvet black, margined with white ; from the ears a broad stripe of reddish-white, from the upper eyelid of each side, joins the white bordering the ears ; and there are rudiments of another in the middle of the bright chestnut nape. Rest of the upper plumage pale reddish-brown, each feather striped in the middle with blackish. Wing-coverts with two obsolete white bands ; primaries hair-brown, their exterior edges whitish. Belly and under tail-coverts dusky-white ; sides of the breast and flanks spotted with black. Bill bright lemon-yellow, tipped with black. Legs pitch-black.”

The female differs in having the chin greyish ; the black plumage of the head and breast edged with pale-brown and grey ; and the chestnut feathers of the nape fringed with white. The white stripes are duller.

GENUS EMBERIZA, LINN. BUNTING.

GENERIC CHARACTERS.

BILL conical, strong, hard, and sharp-pointed; the tomia of both mandibles bending inwards, and compressed towards the point; the upper mandible narrower and smaller than the under one, and its roof furnished with a hard bony knob. Base of the mandibles (or gape) forming an angle, and rather open. Nostrils basal and round, partly hidden by the small feathers at the base of the bill. Feet having three toes before and one behind; the anterior ones entirely divided. Claws rather long and curved. Wings with the first quills rather shorter than the second and third, which are the longest in each wing.

This genus, as now restricted, contains such species as agree in the essential characters possessed by *Emberiza miliaria*, *E. citrinella*, &c. Their food principally consists of grain and seeds; but, in summer, also of insects and larvæ. They have an extensive distribution, species being found in all quarters of the globe.

COMMON BUNTING.

EMBERIZA MILIARIA, Linn.

PLATE LII. FIG. 1.

- Emberiza miliaria*, Linn. Syst. 1. p. 308. 3.—Faun. Suec. p. 228.—*Lath.* Ind. Ornith. v. 1. p. 402. sp. 12.—*Gmel.* Syst. 2. p. 868. sp. 3.
Emberiza alba, *Raii* Syn. p. 93. A. 1.—*Will.* p. 195. t. 40.
Cynchramus, *Briss.* 3. p. 292. 10.
 Le Proyer, *Buff.* Ois. v. 4. p. 355. t. 16.—*Id.* Pl. Enl. 233.
 Bruant Proyer, *Temm.* Man. d'Ornith. v. 1. p. 306.
 Der Grauammer, *Bechst.* Naturg. Deut. v. 3. p. 262.—*Meyer*, Tasschenb.
 Deut. v. 1. p. 180.—*Frisch*, Vög. t. 6. f. 2. B.
 Bunting, Br. Zool. 1. No. 118.—*Arct. Zool.* 2. p. 366. B.—*Albin.* 2. t. 50.
Will. (Ang.) p. 267. t. 40.—*Lath.* Syn. 3. p. 171.—*Mont.* Ornith. Dict.—*Lewin's* Br. Birds, 2. t. 74.—*Walc.* Syn. 2. t. 213.—*Pult.* Cat. Dorset. p. 11.—*Bewick's* Br. Birds, v. 1. p. t. 141.—*Low's* Faun. Orcad. p. 60.—*Shaw's* Zool. 9. p. 360.

PROVINCIAL—Corn Bunting, Bunting Lark.

THIS well known species is to be met with in all the cultivated parts of the kingdom, extending even to the Orkney Islands, where it is mentioned as indigenous and abundant.

In spring, previous to the season of propagation, breaking up their winter societies, they disperse themselves throughout the country, and breed in corn or meadow grounds. The male bird, at this period, may generally be seen perched on the highest twig of a hedge, or upon the top of a tall dock or thistle, uttering the singular but unmusical notes with which he serenades his mate during incubation, and which have been aptly enough described by Low under the Scottish term *a skirle*. At this time his flight is also peculiar, and unlike that used throughout the rest of the year.

The nest is placed among the herbage, near to the ground, Nest, &c. and composed of straw and dried grasses, lined with fibres of root and hair. The eggs, from four to six in number, are of a pale yellowish-grey colour, with spots and veins of red-dish-brown.

Towards the end of autumn these birds collect in large flocks, remaining together till the following spring. At this period they become very fat, and are excellent eating; and being very similar to the Lark in colour, are frequently sold as such, to those unacquainted with the distinctive characters of the two birds.

The Bunting is found throughout Europe, and extends very far to the northward.

PLATE 52. Fig. 1. Natural size.

Culmen of the bill blackish-brown, the rest yellowish-white. The whole of the upper parts yellowish-brown, inclining to oil-green, with the centres of the feathers blackish-brown. Throat, lower part of the neck, and under parts, yellowish-white, or straw-yellow, with numerous triangular black spots; but the middle of the belly immaculate. Wing-coverts and quills blackish-brown, deeply edged with yellowish-brown. Tail the

same. Legs and claws pale wood-brown, with a tinge of pink.

The female resembles the male.

YELLOW BUNTING.

EMBERIZA CITRINELLA, Linn.

PLATE LII. FIGS. 2. 3.

Emberiza citrinella, Linn. Syst. I. p. 309. 5.—*Gmel.* Syst. I. p. 870. sp. 5.
—*Lath.* Ind. Ornith. v. I. p. 400. sp. 7.—*Raii* Syn. p. 93. A. 2.—*Will.* p. 196. t. 40.

Emberiza flava, Briss. 3. p. 258. 1.

Le Bruant, Buff. Ois. v. 4. p. 342. t. 8.—*Id.* Pl. Enl. 30. f. 1.

Bruant jaune, Temm. Man. d'Ornith. v. I. p. 304.

Goldammer, Bechst. Naturg. Deut. v. 3. p. 252.—*Meyer,* Tasschenb. Deut. v. I. p. 178.—*Id.* Vög. Deut. 9. male and female.—*Frisch,* t. 5. A. and B.

Yellow Bunting, Br. Zool. No. 119. t. 50.—*Arct. Zool.* 2. p. 367. C.—*Albin.* v. I. t. 66.—*Lewin's Br. Birds,* 2. t. 73.—*Lath.* Syn. v. 3. p. 170.—*Mont. Ornith. Dict.* v. 1.—*Walc.* Syn. 2. t. 212.—*Bewick's Br. Birds,* v. I. p. t. 143.—*Shaw's Zool.* v. 9. p. 351. t. 55. and 56, both figures incorrect copies.

PROVINCIAL—Yellow Hammer, Yellow Yowley.

FEW of our indigenous birds possess a plumage of more delicate tints than the Yellow Hammer, but from being a very abundant species in all parts of the kingdom, it passes the eye of the common observer almost unnoticed, and it is perhaps by the naturalist alone that its elegant intermixture of shades is duly appreciated. It occurs most plentifully in corn districts, and its geographical distribution does not appear to be extended so far northward as that of the Common Bunting, from its not being enumerated in the Fauna of the Orkneys. Its usual note-call is a short chirp, and its song in the pairing season is as little attractive as in others of its genus, consisting merely of the same note repeated five or six times, and concluded with one in a higher key.

Nest, &c. It builds in low bushes, or upon the ground under a tuft of grass, of which herbage the nest is externally formed, succeeded by a layer of finer grasses, and finished with a lining

of hair. It lays from three to five eggs, of a pale purplish-white, with streaks and waving lines of chocolate-red, which frequently terminate in spots of the same colour. It breeds later than most of our indigenous birds, and the young are seldom able to fly before the beginning of June. In winter Yellow Hammers collect together, and associate with the other granivorous birds that are, during the inclement season, constant intruders on the farmer's stack-yard.

Their food consists of grain and other farinaceous seeds, *Food.* but rarely of insects and worms. They are to be met with throughout the greater part of Europe.

PLATE 52. Fig. 2. The male bird of the natural size.

Head, neck, and upper part of the breast gamboge-yellow, *General
description.* more or less varied with olive-green. Back and scapulars yellowish-brown, inclining to oil-green ; the centres of the feathers being blackish-brown, passing into orange-brown. Wing-coverts and secondaries blackish-brown, deeply edged with brownish-orange. Greater quills black, edged with gamboge-yellow. Rump brownish-orange, margined with greyish-white. The two outer tail-feathers on each side having a large white cone-shaped spot on the inner web ; the rest being brownish-black, edged with yellow. Belly and under tail-coverts gamboge-yellow ; the sides more or less streaked with brownish-orange. Legs and toes yellowish-brown.

Fig. 3. The female, natural size.

The female bird has less of the gamboge-yellow on the *Female.* head and neck, and the under parts are more clouded and streaked with brownish-orange.

The young strongly resemble the female, till after the autumnal moult.

REED-BUNTING.

EMBERIZA SCHÖENICULUS. Linn.

PLATE LII. FIG. 5, 6.

Emberiza Schœniculus, *Linn.* *Syst.* 1. p. 311. 17.—*Gmel.* *Syst.* 1. p. 861. sp. 17.—*Lath.* *Ind. Ornith.* v. 1. p. 402. sp. 13.

Emberiza arundinacea, *Gmel.* *Syst.* 1. p. 881.—*Lath.* *Ind. Ornith.* p. 403. var. **X.**

Passer torquatus, et *arundinaceus*, *Raii* *Syn.* p. 93. A. 3.—*Will.* p. 196. —*Briss.* 3. p. 274. 5.

Ortolan de Roseaux, *Buff.* *Ois.* v. 4. p. 315.—*Id.* *Pl. Enl.* 247. f. 2. male, and *pl. 477.* f. 2. female.

Le Coqueluche, *Buff.* *Ois.* v. 4. p. 320. male.

Bruant de Roseau, *Tenn.* *Man. d'Ornith.* v. 1. p. 307.

Der Rhorhammer, *Bechst.* *Naturg.* *Deut.* v. 3. p. 269.—*Meyer*, *Tasschenb.* *Deut.* v. 1. p. 181.—*Frisch*, t. 7. f. 1. A. B.

Reed-Bunting, *Br. Zool.* No. 120.—*Arct. Zool.* 2. p. 368. E.—*Albin.* 2. t. 51.—*Lath.* *Syn.* 8. p. 173.—*Id. Sup.* p. 157.—*Lewin's Br. Birds.* 2. t. 75.—*Haye's Br. Birds*, t. 35.—*Mont. Ornith. Dict.* v. 2.—*Bewick's Br. Birds*, p. and t. 145.—*Shaw's Zool.* v. 9. p. 362. t. 59.—*Walc.* t. 14.

Emberiza passerina, *Lath.* *Ind. Ornith.* 3. p. 403. sp. 14.—*Gmel.* *Syst.* 1. p. 871.

Passerine Bunting, *Lath.* *Syn.* 3. p. 196. 35.

Mountain Sparrow, *Alb.* v. 3. t. 66.

Sperlingsammer, *Bechst.* *Naturg.* *Deut.* v. 3. p. 277.—*Id.* *Tasschenb.* *Deut.* p. 141. sp. 9.

PROVINCIAL—Reed-Sparrow, Black-headed Bunting.

Syn. of
young Male
or old Female.

Nest, &c.

THIS is a common bird upon marshes, the edges of rivers, and other places favourable for reeds and aquatic herbage. By many authors the nidification of this bird has been confounded with that of the Sedge-Warbler (*Salicaria Phragmitis*), a species inhabiting the same localities. The nest, however, differs both in fabric and situation, being generally built in a low bush, or tuft of grass, and not suspended between the stems of the reeds, just above the surface of the water, as I have before described in the account of the Sedge-Warbler. The materials are also in some degree different; consisting, in the instance now before us, of dried grasses and moss, lined with hair. The eggs are four or five in number, of a greyish-white, with a pinkish tinge, spotted and veined with

chocolate-red, and very similar to those of the Chaffinch. Some authors have again confounded the two species in another respect, gifting the Reed-Bunting with a sweet and varied song, often poured forth during the still hour of night, thus robbing our little warbler of the praise justly due to its unwearied exertions.

The song (if it may be so called) of the present bird, is even more monotonous and uninteresting than that of the Yellow Hammer or the Common Bunting, and is uttered, in the breeding-season, during the greater part of the day, from the very top of some bush, a little elevated above the surrounding herbage.

The food of this species consists of the seeds of reeds and other aquatic plants, which is augmented, during the period of propagation, by insects and their larvae. It associates, in severe winters, with the Yellow Hammer, and other granivorous small birds, and frequently with them approaches the farm-yard, as to a sure place of supply. Like the above-mentioned bird, it does not begin to breed until the spring is pretty far advanced.

The Reed-Bunting is found to extend from the warm provinces of Italy as far northward as Sweden and Russia. According to TEMMINCK, it is particularly abundant in Holland.

PLATE 52: Fig. 5. Male bird, natural size.

Bill black. Crown of the head, occiput, cheeks, throat, General and gorget ink-black. On the sides of the neck, a little descrip-
tion. below the angle of the bill, is a white spot. Collar round the neck, sides of the breast, belly, and under tail-coverts white; on the sides and flanks a few long blackish-brown streaks. Back and wings clear pale orange-brown, with the centre of each feather brownish-black. Quills hair-brown, margined with orange-brown. Lower back and rump bluish-grey, with a few black spots, and tinged in parts with yellowish-brown. Tail

having the two middle feathers blackish-brown, deeply edged with pale orange-brown ; the two outer feathers half-white and half-black, with an oblong hair-brown spot near the tip ; the rest of the feathers black. Legs and toes broccoli-brown. In winter, the feathers of the head, throat, and gorget, are margined with yellowish-brown, which disappears on the approach of spring.

Female. Fig. 6. The female, also of the natural size.

Throat white. Above the eye is a streak of pale reddish-brown. Crown of the head yellowish-brown, with the shafts of the feathers black. Under parts streaked with blackish-brown.

The young birds resemble the female.

CIRL BUNTING.

EMBERIZA CIRLUS, Linn.

PLATE LII. FIG. 4.

Emberiza cirlus, Linn. Syst. 1. p. 311. 12.—Gmel. Syst. 1. 879. sp. 12.—Lath. Ind. Ornith. v. 1. p. 401. sp. 10.—Raai Syn. p. 93. 4.—Will. p. 196.

Emberiza elcathorax, Bechst. p. 135. sp. 4.

Le Bruant de Haie, ou Zizi, Buff. Ois. v. 4. p. 137.—Id. Pl. Enl. 653. f. 1. old male, f. 2. the young.

Bruant Zizi ou de Haie, Temm. Man. d'Ornith. v. 1. p. 313.

Zaunammer, Bechst. Naturg. Deut. v. 3. p. 292.—Meyer, Tasschenb. Deut. v. 1. p. 185.

Cirl Bunting, Lath. Syn. 3. p. 190. 26.—Mont. Ornith. Dict. v. 1.—Id. Supp. and figure of male.—Id. Trans. Linn. Soc. v. 7. p. 276.—Shaw's Zool. v. 9. p. 356. t. 57. a copy from Montagu's figure.

THE Cirl-Bunting is a bird of very partial distribution in this kingdom, its range appearing to be confined to the very mildest part of England, as it has been hitherto only found in Devonshire, and in one or two adjoining counties ; and there even more abundantly near to the coast than farther inland. It was first discovered by MONTAGU, near Kingsbridge, and added to the British Fauna ; and my readers are referred to his interesting paper on the natural history of this bird, in the seventh volume of the Transactions of

the Linnean Society ; as well as to the account given of it in the Ornithological Dictionary and Supplement of the same author. Its habits and manners seem nearest allied to the Yellow-Hammer, with which bird it frequently associates in winter ; and its run of notes is similar, but shorter, and not quite so shrill.—It places its nest in a furze or other low bush, Nest, &c. very near to the ground ; this is composed of the dry stalks of grasses, intermingled with fibres of root, and moss, and lined with hair, and contains four or five eggs, very like those of the Yellow-Hammer, but rather less ; being of a greyish-white, marked with waving lines, frequently ending in spots of a reddish-brown, or chocolate colour.—The food of this Food. species consists of grain and other seeds, as well as insects, which indeed appear to form its principal support during the summer. MONTAGU tells us that this diet was most acceptable to the young birds he reared, and that the common grasshopper was their favourite morsel. After they could peck, the smaller seeds and oats were in request, but wheat and barley were invariably refused.

According to the continental authors, the Cirl-Bunting is abundant in the warmer parts of France, in Italy, and on the shores of the Mediterranean ; but does not inhabit the colder regions.

PLATE 52. Fig. 4. A male bird of the natural size.

Above and below the eye is a streak of primrose-yellow. General description.
Crown of the head yellowish-grey, with the centres of the feathers black. Neck and lower part of the breast yellowish-grey, inclining to olive-green. Throat, and streak before and behind the eye, blackish-green. Upper part of the breast, or gorget, primrose-yellow. Feathers upon the back blackish-brown, passing into orange-brown, and edged with greyish-white. Scapulars reddish orange, edged with yellowish-white. Quills greenish-grey, edged with primrose-yellow. Belly and sides primrose-yellow, the latter varied with reddish-

orange. Two outer tail feathers having the anterior part of their inner webs white; the rest being black, edged with yellowish-grey. Legs and toes pale brown with a tinge of flesh red.

The female has the head oil-green, with spots of a darker shade. Above the eye is a dull yellow streak, passing down the side of the head. Chin and throat yellowish-brown, streaked with darker brown. Belly and sides primrose-yellow, with large dusky streaks. Upper parts like the male bird, but with the colours not so bright.

ORTOLAN-BUNTING.

EMBERIZA HORTULANA.

PLATE C. FIG. 7.

- Emberiza Hortulana, *Linn.* 1. 309. 4.—*Gmel.* *Syst.* 1. 869.—*Lath.* *Ind Orn.* 1. 399. sp. 5.
Hortulanus, *Briss.* 3. 269. 4.—*Raii* *Syn.* 94. 6.—*Will.* 197. t. 40.
Emberiza Tunstalli, *Lath.* *Ind. Orn.* 1. 418. sp. 69.
Emberiza chlorocephala, *Gmel.* *Syn.* 1. 887.
L'Ortolan, *Buff. Ois.* 1. 305. t. 14.—*Id. Pl. Enl.* 247. f. 1. male.
Bruant Ortolan, *Temm. Man. d'Orn.* 1. 311.
Garten Ammer, *Bechst. Naturg. Deut.* 3. 283.—*Meyer*, *Tasschenb. Deut.* 1. 183.
Ortolan-Bunting, *Arct. Zool.* 2. 367. D.—*Allin*, 3. t. 50.—*Lath.* *Syn.* 3. 166. 5.—*Id. sup.* 157
Green-headed Bunting, *Lath.* *Syn.* 3. 211. 61.—*Lewin's Br. Birds*, 2. t. 76.—*Bewick's Br. Birds*, *Ed.* 1826. p. t. 170

ALTHOUGH this species has not hitherto been included in the list of British Birds, it would appear, that it has long been entitled to rank, as an occasional visitant; if we are to consider *Emberiza Tunstalli* of LATHAM, (*Emb. chlorocephala* of GMELIN), and the *Green-headed Bunting* figured and described by BROWN, (and which was caught in Mary-la-Bonne fields) as being the same, of which I think there can be little or no doubt entertained, upon comparing the descriptions of these individuals with that of *Emb. Hortulana*, by TEMMINCK and other continental authors. That

Occasional
Visitant.

the *Green-headed Bunting* of BEWICK (figured in the later editions of his work, from a bird caught at sea upon the Yorkshire coast in May 1822, now in the Museum of the Natural History Society, at Newcastle-upon-Tyne, and considered by him to be the same as *Emb. Tunstalli*, and the Green-headed Bunting of LATHAM and BROWN) is identical with the true *Ember. Hortulana*; I feel perfectly convinced, not only from the correct description he has given, answering in every particular to a bird of this species now before me, but from an examination of his very specimen. The figure I am enabled to give upon the supplementary Plate C., is taken from a British-killed bird, a fine male, in the valuable collection of MR YARRELL, which he kindly lent me for this purpose. The present bird is closely allied to the Yellow and the Cirl Buntings, and, by a common observer, might possibly be mistaken for a female of the first named species. It is a native of the central and southern provinces of Europe, but is found occasionally as far to the northward as Sweden and Holland, from which latter country it is probable our occasional visitors find their way. In Italy, where it is very common, and in parts of France, it is highly esteemed for its fatness and the flavour of its flesh. Nest, &c. It breeds in thickets, corn-fields, low hedges, &c., and lays four or five eggs of a greyish-white, tinged with a pinkish black, and marked with streaks or veins of brown.—It feeds Food. on millet and other grain, and in summer (previous to the ripening of the grassy seeds) on insects and larvæ, on which the young are also principally reared. According to TEMMINCK this species is subject to great variations of plumage, specimens being occasionally met with entirely white; others with a great admixture of that colour; and some again of an uniform blackish-brown, which he attributed to their feeding upon hemp-seed, a diet known to have the same effect upon Bullfinches, and other *Fringillidæ*, when kept in a state of confinement.

PLATE C. Fig. 7. Figure of the natural size. Form typical.

General description.

Bill reddish-brown, scarcely so thick as that of the Yellow Bunting, and larger in proportion. Head, hind part of the neck, and breast greenish-grey. Auriculars mixed yellow and blackish-grey. Streak from the corners of the lower mandible, eyes, orbits, chin, and throat, pale lemon-yellow ; the streak from the corners of the mouth being divided from the yellow of the chin, by a narrow band of greenish-grey. Feathers of the back and the seapulars having dark brown centres, their marginal portions being a yellowish-brown, slightly tinged with oil-green. Lower part of the back, and upper tail coverts, yellowish-brown. Under plumage pale reddish-chestnut ; the feathers being tipped with greyish-white. Greater coverts and quills hair-brown, margined with yellowish-white. Tail hair-brown ; margined paler ; nearly square at the end ; the two outer feathers on each side having the anterior part of their inner webs white. Legs yellowish-brown, with a reddish tinge. Hind claw not much curved.

SUBFAMILY FRINGILLANA, SWAINS.

This group, which embraces the Sparrows (*genus Passer*) and other nearly allied genera, with the birds also belonging to the genus *Fringilla*, as now restricted, (represented by *Fringilla carlebs*, the *Goldfinches* and *Siskins*) distinguishes its members by a conic bill, nearly entire, and with the lower mandible frequently smaller than the upper. Their connection with the foregoing, as well as with the subsequent minor divisions or subfamilies, are supported by forms diverging from the Type, and assuming to a certain extent the more prominent characteristics of the others.

They subsist upon seeds and grain, the harder ones of which they deprive of the outer covering by means of their

strong bill, and by the convenient form of the cutting edges of the lower mandible. Many of the species associate in large flocks during the autumn and winter. They have a wide geographical distribution, some being found in most climates, and in all parts of the globe.

GENUS PASSER, *AUCT.* SPARROW.

GENERIC CHARACTERS.

BILL strong, conical, longer than deep, the upper mandible slightly curved ; the tip emarginate ; culmen slightly raised ; lower mandible compressed, and smaller than the upper. Nostrils lateral, immediately behind the bulging base of the upper mandible, round, and nearly concealed from view by small frontal plumes. Wings having the second quill-feather rather the longest. Legs with the tarsi of nearly the same length as the middle toe ; toes three before and one behind, the front ones divided ; claws sharp and curved ; that of the hind toe rather exceeding in size that of the middle one. Tail square, or very slightly forked.

The Sparrows, which form a well marked group, and are widely distributed, bear throughout all the species a marked resemblance to each other in the prevailing colours and disposition of their plumage. With the Buntings and other birds belonging to the preceding Subfamily they are intimately allied by the means of the Ground-Sparrows and others of North America ; and, by the intervention of the genus *Pipilo* (VIEILL.) the necessary connection is also kept up with the Subfamily *Tanagrina*. In Europe, besides the Common and Tree Sparrows (which are natives of Britain), three other species are recognised, viz. *Passer Cisalpinus* (TEMM.), *Passer Petronia* (LINN.), and *Passer Hispaniolensis* (TEMM.).

HOUSE-SPARROW.

PASSER DOMESTICUS, Ray.

PLATE LIV. FIGS. 4. 5.

*Fringilla domestica, Linn. Syst. 1. p. 323. 36.—Gmel. Syst. 1. p. 925. sp. 36.
—Lath. Ind. Ornith. v. 1. p. 432. sp. 1.*

Passer domesticus, Raii Syn. p. 86. A.—Will. p. 182.—Briss. 3. p. 72.

*Le Moineau, Buff. Ois. v. 3. p. 474. t. 29. f. 1.—Id. Pl. Enl. 6. f. 1. and 2.
Gros-bec Moineau, Temm. Man. d'Ornith. v. 1. p. 350.*

*Haus Sperling, Bechst. Naturg. Deut. v. 3. p. 107.—Frisch. t. 8. f. 1. A. B.
—Meyer, Tasschenb. Deut. v. 1. p. 156.*

*House-Sparrow, Br. Zool. 1. No. 127. t. 51.—Arct. Zool. 2. p. 382. g.—
Will. (Angl.) p. 244. t. 44.—Lath. Syn. 3. p. 243. 1.—Id. Supp. p. 163.—
Lewin's Br. Birds, 2. t. 77.—Mont. Ornith. Dict. v. 2.—Albin, 1. t. 62.—
Walc. Syn. 2. t. 215.—Pult. Cat. Dorset. p. 12.—Low's Faun. Orcad.
p. 59.—Bewick's Br. Birds, 1. p. t. 154.—Shaw's Zool. 9. p. 429. t. 64.
fig. 1.*

THIS very well known bird may be found in all the cultivated and inhabited parts of the country, and is reckoned by Low amongst the feathered inhabitants of the northern isles of Scotland, where it abounds to the annoyance of the cultivator, in the serious destruction of bigg *, the only grain that is reared to any extent in these remote settlements. It is seldom to be seen far from the habitation of man, and is the only bird that ventures, in a general way, to establish its permanent residence amidst the stir and din of towns and cities, where (attracted probably by the superior supply of food) it is even more abundant than in the quiet villages and hamlets. In geographical distribution, it appears confined to the northern provinces of Europe, and TEMMINCK assigns the great chains of the Alps and Pyrenees as its limits towards the south; the *Fringilla cisalpina*, a species nearly allied, supplying its place in the warmer parts of Europe. The Sparrow is not particular in its choice of a place for nidification, being contented with any hole in a wall, in the thatch, or under the eaves of houses; and frequently dis-

* Bigg, a coarse kind of barley.

lodges the Martin from the nest, fabricated with so much skill and labour.—Its own nest is, in all these situations, Nest, &c. made conformable to the dimensions of the place selected, and consists of hay and feathers loosely and negligently put together. Under some circumstances, the Sparrow will often build in trees or very lofty hedges; and the nest is then made of a much larger size, and firmer texture, with an arched top, but composed of the above mentioned materials, with the addition of any soft substances, such as rags, wool, &c. that can be collected about the premises it frequents.—It lays five or six eggs, of a greyish-white, spotted with deep yellowish-grey, and ash-grey, and of a long oval form.—This bird feeds upon all kinds of grain and seeds, and in Food. the summer destroys vast numbers of larvæ, moths, and butterflies, with which its young are principally fed; thus making ample compensation for the havoc it commits in the ripening fields of corn. Although a bold and obtrusive bird (from its habits of familiarity with the dwelling of man), it is very wary, and is not easily taken by snares; but great numbers are occasionally destroyed when at their nightly roost, by the bat-fowling net.

In the country, the Sparrow exhibits a gloss and intermixture of colours rarely to be seen in those inhabiting large towns, which soon become of a dingy and almost uniform hue, from the accumulation of dust and smoke upon their plumage.

Varieties of this bird, with more or less of a cream colour, are frequently met with; and I have seen specimens of an unvaried blackish-brown.

PLATE 54. Fig. 4. Male bird, of the natural size.

Bill black. Crown of the head and occiput deep bluish-grey. Space between the bill and eyes, chin, throat, and gorget, black; the feathers of the latter margined with white. Above the eyes, and passing behind the ear-coverts, is a band of deep chestnut-brown. Cheeks and sides of the neck greyish-white. Feathers of the

General description.
Male.

back black, deeply edged with pale chestnut-brown. Lesser wing-coverts deep orange-brown, the row imposed upon the greater coverts having their tips white, and forming an oblique bar across each wing. Greater coverts and quills brownish-black, edged with pale chestnut-brown. Tail clove-brown, margined with yellowish-brown. Lower part of the back, and rump yellowish-grey. Belly and vent smoke-grey. Legs wood-brown.

Fig. 5. The female. Natural size.

Female. Head and nape of the neck light broccoli-brown. Above the eyes is a streak of straw-yellow. Upper plumage yellowish-brown, inclining to broccoli-brown, with the centres of the feathers darkest. Throat and middle of the belly greyish-white; the sides dashed with broccoli-brown.

TREE-SPARROW.

PASSER MONTANUS, Ray.

PLATE LV. FIG. 2.

Passer montanus, Raii Syn. p. 87. 15.—*Briss.* 3. p. 79.

Fringilla montana, Linn. 1. p. 234. 37.—*Gmel. Syst.* 1. p. 925. sp. 27.—

Lath. Ind. Ornith. v. 1. p. 433. sp. 2.

Loxia Hamburgia, Gmel. Syst. 1. p. 854. sp. 68.

Le Friquet, Buff. Ois. v. 3. p. 489. t. 29. f. 2.—*Id. Pl. Enl.* 267. fig. 1.

La Hamboureaux, Buff. Ois. v. 4. p. 398.

Gros-Bec Friquet, Temm. Man. d'Ornith. v. 1. p. 354.

Der Feldsperling, Bechst. Naturg. Deut. v. 3. p. 124.—*Meyer, Tasschenb.* Deut. v. 1. p. 158.—*Frisch, Vög.* t. 7. f. 2. male.

De Ringmusch, Sepp. Nederl. Vög. p. 79.

Hamburgh Tree-Creeper, Albin, 3. t. 24.

Hamburgh Grosbeak, Lath. Syn. 3. p. 149. 64.

Tree or Mountain Sparrow, Br. Zool. 1. No. 128.—*Arct. Zool.* 2. No. 246.

Will. (Angl.) p. 252. t. 25.—*Lewin's Br. Birds,* 2. t. 78.—*Lath. Syn.* 3.

p. 252. 2.—*Id. Supp.*—*Don, Br. Birds,* 4. t. 88.—*Bewick's Br. Birds,* 1.

p. 158.—*Shaw's Zool.* 9. p. 432. t. 64. f. 2.

THIS species is but partially distributed, and far from being abundant, even in those districts where it has long

been known as indigenous, although many authors have asserted the contrary, and have described it as numerous in Lincolnshire, Yorkshire, and Lancashire. It may indeed be found in each of these counties, but not in such numbers as might naturally be inferred from the accounts of preceding writers. MONTAGU, in the Supplement to his Ornithological Dictionary, has given a very minute and interesting description of the peculiar habits of this bird, and has proved that the female is in plumage not distinguishable from the male bird, although former writers had described it as differing in the same degree as the female of the Common Sparrow does from the male of that species.

The eastern, and some of the northern, counties seem to be the extent of its range in this country, as I have not been able to trace its residence in any of the southern or western ones. Specimens have been sent to me from the neighbourhood of Cambridge, and I have seen it in parts of the county of Durham, but not farther to the northward *. It is a bird of retired habits, and is never found to frequent villages or other dwellings like the common species, but is generally to be met with where old trees (particularly pollards, hollowed by decay) are abundant, as in the holes of these it finds a congenial retreat, and proper situation for its nest, of which Nest, &c. the materials are hay and straw intermixed, with a lining of feathers.

The eggs are four or five in number, similar in colour to those of the House-Sparrow, but rather smaller.—The food of this species consists of various seeds and grain, and the buds of trees; but during the breeding season it destroys quantities of larvæ, moths, and others of the insect tribe, on which its callow young are principally supported.—Its form is more slender than that of the preceding bird, and its motions full of spirit and activity; like it also, the Tree-Spar-

* Several instances of its capture in the neighbourhood of Newcastle have since been communicated to me.

row possesses no song, and its usual note is somewhat similar in tone to that of the former, but rather shriller.

It is plentiful in France, Holland, and other parts of the Continent, extending its range southward to Spain and Italy.

PLATE 55. Fig. 2. Natural size.

General description.

Crown of the head and nape of the neck deep chestnut-brown, with a tinge of grey. Space between the bill and eyes, spot behind the ear, throat, and under part of the neck, black. Sides of the neck, and collar on the nape of the same, white. Under parts greyish-white. Upper part of the back having one web of the feathers black, and the other pale chestnut, inclining to yellowish-brown. Wing-coverts chestnut-brown, with the tips of the greater and the lower row of the lesser ones white, and forming two bars across the wings. Quills and secondaries blackish-brown, margined with yellowish-brown. Lower part of the back, and rump, yellowish-grey. Tail hair-brown, margined paler. Legs pale or wood-brown.

GENUS FRINGILLA, LINN. FINCH.

GENERIC CHARACTERS.

BILL conical, longer than deep, straight, and pointed; cutting edges entire, and forming a straight commissure. Nostrils basal, lateral, oval, partly hidden by the frontal plumes. Tail slightly forked. Legs having the tarsi of mean length, with the front toes divided; adapted for hopping or perching. Claws sharp.

Under this genus rank *Fringilla calebs*, *Fring. montefringilla*, and a variety of other species, distinguished by a bill less strong and thick, and less swollen at the base, than

that of the typical forms of the next subfamily (*Coccothraustina*). Their habits are also less arboreal; and most of them obtain their food (consisting of the scattered seeds of grasses and cruciform plants) upon the ground, where they move by hopping with great facility. The males of many species undergo a change, or rather variation of plumage, in the spring, produced by shedding the extreme tips of the feathers, and acquiring after that process an additional brightness and intensity of colour.

CHAFFINCH.

Fringilla cœlebs, Linn.

PLATE LIV. FIGS. 6. 7.

Fringilla cœlebs, Linn. Syst. 1. p. 318.—Gmel. Syst. 1. p. 901. sp. 5.—Lath. Ind. Ornith. v. 1. p. 437. 12.—Raii Syn. p. 88. 16. A.—Will. p. 186. t. 45. f. 4.—Briss. 3. p. 184. 36.

Le Pinson, Buff. Ois. v. 4. p. 109. t. 4.—Id. Pl. Enl. 54. f. 1. the male.

Gros-Bec Pinson, Temm. Man. d'Ornith. v. 1. p. 357.

Gemeine Fink, Bechst. Naturg. Deut. v. 3. p. 75.—Meyer, Tasschenb. Deut. v. 1. p. 150.—Id. Vög. Deut. v. 1. f. 1. and 2. male and female in spring plumage.—Frisch. t. 1. f. 1.

Scheld Fink, Sepp. Nederl. Vög. p. 141.

Chaffinch, Br. Zool. 1. No. 125.—Arct. Zool. 2. p. 381. F.—Will. (Angl.) p. 253. 45.—Albin. 1. t. 63.—Lath. Syn. 3. p. 259. 10.—Id. Supp. p. 165.—Lewin's Br. Birds, 2. t. 79.—Walc. Syn. t. 217.—Pult. Cat. Dorset, p. 12.—Mont. Ornith. Dict. v. 1.—Bewick's Br. Birds, p. 160.—Low's Faun. Orcad. p. 12.—Shaw's Zool. 9. p. 442. 65. fig. 1.

PROVINCIAL—Spink, Beechfinch, Pink, Twink, Skelly, Shell-Apple, Horsefinch, Scobby.

THIS lively bird is very common in all the open and cultivated parts of the kingdom, and is well known for its early song, which, although short, and consisting only of three or four notes, is grateful to the ear, from associations connected with the period at which it usually commences. All the British ornithologists describe this species as permanently resident with us, and nowhere subject to that separation of the sexes, and the consequent equatorial movement of the fe-

males, which is known to take place in Sweden and other northern countries. The fact, however, is otherwise, as the experience of a series of years has evinced that these birds, in a general point of view, obey the same natural law in the north of England. In Northumberland and Scotland, this separation takes place about the month of November, and from that period till the return of spring, few females are to be seen, and those few always in distinct societies.—The males remain, and are met with, during the winter, in immense flocks, feeding with other granivorous birds in the stubble lands, as long as the weather continues mild, and the ground free from snow; and resorting, upon the approach of storm, to farm-yards, and other places of refuge and supply. This separation of the sexes, I am induced to believe, takes place in many other species, with respect to their migratory movements, as I have before remarked in the account of the Snow-Bunting. This appears also to be the case with the Woodcock, having observed that the first flight of these birds (which seldom remains longer than for a few days to recruit, and then passes southward), consists chiefly of females; whilst, on the contrary, the subsequent and latest flights (which continue with us), are principally composed of males. It has been noticed by several authors, that the arrival of the males, in a number of our summer visitants, precedes that of the females by many days; a fact from which we might infer that in such species a similar separation exists between the sexes during their equatorial migration.

As these birds are very early breeders, the male Chaffinch utters his love-notes almost as soon as the Thrush or Gold-crested *Regulus*.—They build in various situations upon the trees and bushes, sometimes amidst the ivy encircling their trunks, at other times in the forks of smaller branches, and very frequently in old apple-trees, overgrown with moss and lichens.—The nest exhibits great symmetry and beauty, and is formed of different mosses and lichens, closely interwoven with wool, and warmly lined with feathers and hair; in its

outward appearance, always accordant with the particular colour of its situation. The eggs are four or five in number, of a bluish-white, tinged with pink, and marked with streaks and spots of purplish-red.—In summer the Chaffinch feeds Food. much upon insects and their larvæ, and I have witnessed its assiduity, during the autumn, in devouring the females of a large species of *aphis*, that infests the trunks and stronger branches of the larch, and some other kinds of fir. In winter, grain and other seeds constitute its food.

It is a species widely disseminated, and found in almost all parts of Europe, being sedentary in the warmer provinces, but migratory in those situated to the northward.

PLATE 54. Fig. 6. A male bird in the spring plumage,
and of the natural size.

Bill clear greyish-blue, with the tip black. Crown of the head and nape of the neck deep greyish-blue. Back chestnut-brown; the feathers being margined with yellowish-grey. Rump deep sulphur-yellow. Lesser wing-coverts white; those of the primary quills and the bastard wing entirely black; secondary coverts black, tipped with primrose-yellow. The three first quills black, having the outer web margined with white; the rest, and the secondaries, with a white spot at the base, with part of their inner webs white, and with the interior half of the outer webs margined with pale sulphur-yellow. Tail, with the two middle feathers, bluish-grey, margined with yellow; the three next, on each side, entirely black; and the two outer ones with a large white spot on the inner web, the exterior web being margined with white. Cheeks, neck, and throat, pale reddish-brown, passing upon the breast and flanks into pale vinous-red. Middle of the belly and vent white. Legs and feet broccoli-brown.

General description.
Male.

Fig. 7. The female. Natural size.

- Female. Head, upper parts of the body, and scapulars, pale olive-green, tinged with grey. Cheeks and lower parts grey, tinged with pale-yellowish-brown. The bands upon the wings not so large or distinct as those of the male; the lower one of a yellowish-white. Bill yellowish-grey.
The young males, previous to the autumnal moult, resemble the female.

MOUNTAIN FINCH.

FRINGILLA MONTIFRINGILLA, Linn.

PLATE LIV. FIGS. 8, 9.

- Fringilla montifringilla, *Linn.* Syst. 1. p. 318. 4.—Faun. Suec. No. 233.—*Gmel.* Syst. 1. p. 902. sp. 4.—*Lath.* Ind. Ornith. v. 1. p. 439. sp. 17.—*Raii* Syn. p. 88.—*Will.* p. 187. t. 45.—*Briss.* 3. p. 155.
Fringilla Lulensis, *Gmel.* Syst. 1. p. 902. sp. 5.—*Lath.* Ind. Ornith. v. 1. p. 452. sp. 63. young female.
Le Pinson d'Ardennes, *Buff.* Ois. v. 4. p. 124. t. 14.—*Id.* Pl. Enl. 54. f. 2. male.
Gros-Bec d'Ardennes, *Temm.* Man. d'Ornith. v. 1. p. 360.
Chardonneret à quatre Raies, *Buff.* Ois. v. 4. p. 210.
Berk-fink, *Bechst.* Naturg. Deut. v. 3. p. 97.—*Meyer*, Tasschenb. Deut. v. 1. p. 151.—*Frisch.* t. 2. f. 2.
Brambling, or Mountain Finch, *Br. Zool.* 1. No. 126.—*Arct. Zool.* 2. p. 381.
E.—*Lewin's Br. Birds*, 2. t. 80.—*Albin.* 3. t. 64.—*Will.* (Ang.) p. 254. t. 45.—*Lath.* Syn. 3. p. 261. 13.—*Mont.* Ornith. Dict.—*Walc.* Syn. 2. t. 218.—*Don.* Br. Birds, 4. t. 85.—*Pult.* Cat. Dorset. p. 12.—*Bewick's Br. Birds*, 1. t. p. 163. male.—*Shaw's Zool.* 9. p. 444. t. 65. f. 2. copy from Bewick.
Lulean Finch, *Lath.* Syn. v. 8. p. 278.—*Penn.* Arct. Zool. v. 2. p. 380. B.

Periodical visitant. THE Mountain Finch is a native of the northern parts of Europe, and inhabits the wild and mountainous districts; where, after breeding, it passes the summer also in the forests of pine and fir which abound in these higher latitudes. In the temperate and warmer regions of this quarter of the globe, it is only known as a winter visitant; arriving towards the close of autumn, and departing to the northward, early in spring. Although few winters pass without our being visited by some of these birds, I have remarked that they

vary considerably in numbers through a succession of seasons, a circumstance, in all probability, occasioned by the state of the weather, as regulating the direction and extent of their equatorial migration.

The Mountain Finch is a bird of handsome appearance, and rather superior in size to the Chaffinch, which in habits and manners it closely resembles. During its residence with us, it frequents the stubble lands, associating often with the Chaffinch and other granivorous birds; and I have observed that it always roosts in fir or larch plantations, if any such are in the neighbourhood of its haunt. The usual call-note of this species, though not unlike that of the Chaffinch, can be easily distinguished by a practised ear; but I am unable to say whether its notes vary in the spring, or whether it possesses any *proper song*. It builds in lofty pine and spruce Nest, &c. trees, and its nest is formed of moss and wool, lined with feathers and hair. It lays four or five white eggs, spotted with yellowish-brown.

PLATE 54. Fig. 8. Male bird in its winter's plumage, and of the natural size.

Head, checks, nape of the neck, and upper part of the back black; having the feathers margined and tipped with yellowish-grey, or yellowish-brown. Throat, breast, scapulars, and lesser wing-coverts pale reddish-brown. Coverts of the secondary quills black, tipped with pale reddish-orange. Greater quills black, with a white spot at the base, and the margins of the outer webs primrose-yellow. Rump, belly, and under tail coverts yellowish-white. Sides inclining to buff-orange, spotted with black. Tail black, edged with grey, and the exterior web of the outer feather white. Base of the bill inclining to lemon-yellow; the tip black. In summer the head, neck, and back are of a deep black, without any of the yellowish-brown that distinguishes these parts in winter; and the bill becomes of a dark bluish-grey.

Female. Fig. 9. The female. Natural size.

Crown of the head hair-brown. Cheeks and nape of the neck ash-grey. Above the eye is a streak of brownish-black. Throat and breast reddish-orange. Back blackish-brown, margined with yellowish-brown. Wings brownish-black.

The young of the year resemble the female, except that the throat is usually white.

GENUS CARDUELIS, AUCT. GOLDFINCH.

GENERIC CHARACTERS.

BILL conical, longer than deep, compressed anteriorly, and drawn to a very acute point. Culmen of each mandible narrow ; tomia of the upper mandible angulated at the base, and slightly sinuated. Nostrils basal, lateral, and hidden by incumbent bristles. Wings of mean length ; the first quill-feather rather shorter than the second and third ; which last are nearly equal, and the longest of all. Tail rather short and forked. Legs having the tarsi short. Lateral toes of equal length ; claws curved and acute ; hind toe tolerably strong, with the sole broad.

The Goldfinches and Siskins form a beautiful group, distinguished by the bright yellow of their plumage, which is well contrasted with black, and in many instances with scarlet, disposed about the head and other parts of the body. They have a wide geographical distribution, and species are found in the new, as well as throughout the different regions of the ancient, world. Their habits are arboreal, and they seldom descend to the ground. They feed upon seeds of various kinds ; the Goldfinches, as commonly called, preferring the seeds of the thistle, and other composite plants ; the Siskins, those of the alder, birch, &c. They possess a varied and pleasing power of song, are easily kept caged, and are

soon rendered tame, and even familiar. A near affinity exhibited in the form of the bill, appears between the Siskins and *Linaria minor* (belonging to the genus *Linaria*), now placed by Mr SWAINSON in the subfamily *Coccothraustina*.

SISKIN.

CARDUELIS SPINUS, Steph.

PLATE LV. FIGS. 6, 7.

Fringilla spinus, *Linn. Syst. 1.* p. 322. 25.—Faun. Suec. No. 237.—*Gmel. Syst. 1.* p. 914. sp. 25.—*Lath. Ind. Ornith. 1.* p. 452. sp. 65.
Ligurinus, Raai Syn. p. 9. A. 5.—*Will. p. 192.* t. 46.—*Briss. 3.* p. 65.
Le Tarin, Buff. Ois. v. 4. p. 221.—*Id. Pl. 485.* f. 3. male.
Gros Bec Tarin, Temm. Man. d'Ornith. v. 1. p. 371.
Siskin or Aberdevine, Br. Zool. No. 129.—*Arct. Zool. 2.* p. 243.—*Will. (Ang.) p. 261.*—*Albin. 3. t. 76.*—*Lewin's Br. Birds, 2.* t. 82.—*Lath. Syn. 3.* p. 289. 58.—*Mont. Supp. to Ornith. Dict.*—*Bewick's Br. Birds, p. t. 167.*—*Shaw's Zool. v. 9.* p. 467. t. 69. copy from Bewick.

THE Siskin is only known in this country as a winter visitor. Occasional periods. In the winters of 1820 and 1821, Northumberland was visited by considerable flocks of these birds, which, during their stay, frequented the margins of rivers, and other small streams, where the alder generally grows spontaneously and in abundance, upon the seeds of which tree, and that of the birch, they appeared principally to subsist. Their partiality for this food brought them into contact with the Lesser Redpole (*Linaria minor*), and with which they often associated during their visit. Since that time, I am not aware of any having migrated into this part of the country, though I have not remitted my search and inquiries after them in their usual haunts *. The same uncertainty attends their appear-

* Since the publication of the first edition, I can add, that for the last four or five years Siskins have visited my plantations in considerable numbers both in spring and autumn. This I attribute to the abundant supply of food furnished by the alder, birch, and also larch trees, as they are frequently observed to be very busily employed about the stems of the latter.

ance in France, and in other parts of the Continent, as we learn from BUFFON and some other writers. The true habitat of this bird appears to be in the northern part of Europe, as it is plentiful in Sweden, Norway, and the north of Germany.—In the neighbourhood of London it is called *Aberdevine*, and is occasionally met with by the bird-catchers, who obtain a considerable price for it, although its song is said to be below mediocrity ; the contrary of which is asserted by BEWICK, who kept a caged Siskin, and says that “ the song, though not so loud as that of the canary, is pleasing and sweetly various.” WILLOUGHBY tells us, that in Sussex, the Siskin is called the *Barley Bird*, as it makes its appearance at the time of sowing that grain ; and this assertion, later compilers have implicitly echoed, though I am inclined to think that the above appellation will be found attached to the Yellow Wagtail, first seen about that time, and not to the Siskin, which has usually left the country before that period.—According to TEMMINCK, it builds in the highest branches of the pine, thus accounting for the nest having escaped the researches of the earlier ornithologists. It is now ascertained to breed in some of the pine woods in the Highlands of Scotland. Near Killin, these birds were observed by Sir WILLIAM JARDINE and myself to be in pairs in the month of June, inhabiting a wood of very old and lofty pines ; but we were unable to procure the nests, from the height and inaccessible nature of the trees.—The eggs are four or five in number, of a bluish-white, speckled with purplish-red.—Its food, in addition to the seeds of the alder and birch, comprises those of the pine, elm, and maple ; and in searching for which its attitudes are very picturesque, similar to those of the Lesser Redpole. It is easily tamed, and, like the Goldfinch, may be taught a variety of tricks. In a confined state, it readily breeds with the Canary Finch.

Food. PLATE 55. Fig. 6. Male bird. Natural size.

Bill dusky, with a pinkish tinge, much compressed ante-

riorly, and very sharp-pointed; the culmen of each mandible forming a very narrow ridge. Forehead, crown of the head, and throat black. Nape of the neck black intermixed with siskin-green. Behind the ear is a broad streak of sulphur-yellow. Neck, breast, base and margins of quill and tail feathers bright sulphur-yellow, inclining in some parts to gamboge-yellow. Greater wing-coverts black, tipped with sulphur-yellow. Upper parts siskin-green, having the centres of the feathers streaked with blackish-green. Flanks greyish-white with a few dark streaks. Abdomen white. Under tail-coverts white, spotted with black. Legs and toes yellowish-brown.

Fig. 7. The female, also of the natural size.

Female.

The whole of the upper parts, cheeks, and sides of the neck siskin-green, intermixed with oil-green, and spotted with blackish-green. Under parts yellowish-white, in some places passing into primrose-yellow; with streaks of greenish-grey or blackish-green upon the breast, flanks, and under tail-coverts. Wings and tail blackish-brown, margined with sulphur and primrose yellows.—White and other varieties of this species are frequently found.

GOLDFINCH.

CARDUELIS ELEGANS, Steph.

PLATE LV. FIGS. 8, 9.

Fringilla Carduelis, *Linn.* Syst. 1.p. 118. 7.—*Gmel.* Syst. 1. p. 903. sp. 7.—*Lath.* Ind. Ornith. v. 1. p. 449.—*Raii* Syn. p. 89. A. 1.—*Will.* p. 189.—*Briss.* 3. p. 53. 1.
 Le Chardonneret, *Buff.* Ois. v. 4. p. 187. t. 10.—*Id.* Pl. Enl. 4. f. 1.
 Gros-bec Chardonneret, *Temm.* Man. d'Ornith. v. 1. p. 376.
 Distel Zeisig, *Bechst.* Naturg. Deut. v. 1. p. 200.—*Meyer,* Tasschenb. Deut. v. 1. p. 167.—*Frisch,* t. 1. f. 2. A, B.
 Goldfinch, or Thistlefinch, Br. Zool. 1. No. 124.—Arct. Zool. 2. p. 283. H.—*Will.* (Ang.) p. 246. t. 46.—*Albin.* 1. t. 64.—*Lath.* Syn. 3. p. 281. 4.—*Lewin's Br. Birds,* 2. t. 81.—*Mont.* Ornith. Dict. 1.—*Walc.* Syn. 2. t. 219.—*Pult.* Cat. Dorset. p. 12.—*Bewick's Br. Birds,* p. t. 165.—*Shaw's Zool.* v. 9. p. 460. bad copy from Bewick.

PROVINCIAL—Gold-Spink.

THIS beautiful finch is common in all but the mountainous parts of Britain. Being in high estimation, on account both of its plumage and song, (which is sweet in tone, and varied in delivery), it is very frequently kept in a state of confinement, and possessing great docility, soon becomes attached to its owner, and may be taught a variety of amusing performances, such as feigning itself to be dead, letting off fire-works, &c. In its natural state, it breeds in gardens, orchards and plantations, and will often select an evergreen for the site of Nest, &c. its nest; which displays much elegance of workmanship, being outwardly formed of lichens, moss, and dry grass interwoven with wool, and very warmly lined with a mixture of the last-named substance, hair, and the seed-down of the willow or thistle. This contains four or five eggs, of a bluish-white, scantily marked with orange-brown spots towards the larger end.

In confinement, it readily pairs and breeds with the Canary Finch. The produce are mules, and are called by the bird-fanciers *Canary Goldfinches*.

This species is subject to considerable varieties of plu-

image, most of which are enumerated by LATHAM, in his Index Ornithologicus. It is common in all the temperate and northern parts of Europe, and is found as far to the southward as the islands of the Archipelago.—Its food consists of the seeds of the several kinds of thistles, the burdock, and dandelion, as well as the oily seeds of many of the cruciform plants.

Food.

Goldfinches do not associate in large flocks; their societies rarely exceeding twenty in number.

PLATE 55. Fig. 8. A male bird of the natural size.

General description.

Bill yellowish-white, with the tip blackish-brown. Base of the bill, space between it and the eyes, occiput and nape of the neck, ink-black. Forehead, temples and throat arterial blood-red. Cheeks, ear-coverts, and lower parts of the neck white. Sides of the breast, back and scapulars deep yellowish-brown. Lower part of the back whitish, intermixed with yellowish-brown. Lesser wing-coverts black. Greater coverts, and basal-half of the quills, brilliant gamboge yellow; the other half black, with a white spot at the tips. Six middle tail-feathers black, with white-pointed tips; the rest of them with a large oval white spot occupying the middle of the inner webs. Belly and vent white, tinged with wood-brown. Legs and toes wood-brown.

Fig. 9. The female. Natural size.

Female.

There is but little difference between her and the male bird. The colours are rather inferior in brilliancy, and the red upon the forehead and throat is frequently mixed with black specks.

SUBFAMILY CORCOTHRAUSTINA *SWAINS.*

THE members of this Subfamily, throughout the typical forms, are distinguished by a very powerful bill, being massively thick at the base, and tapering rapidly to the point. In some genera the culmen of the upper mandible is slightly arched, thus leading to the Subfamily *Pyrrhulina*. The food of the typical species consists of the harder seeds, the exterior covering or shell of which they are able to break by the strength of their bill. Their legs are generally short, and their feet formed for perching, the soles being large, and the claws curved and sharp. Mr SWAINSON justly considers this as the typical group of the *Fringillidae*.

GENUS LINARIA, *AUCT.* LINNET.

GENERIC CHARACTERS.

BILL strait, conical entire; mandibles compressed in the front, and forming a very sharp point; commissure strait. Nostrils, basal, lateral, concealed by incumbent feathers. Wings long, acuminate; with the first, second, and third, quill feathers of nearly equal length. Tail more or less forked. Tarsi slender, short. Feet having the lateral toes of equal length; the hind toe, with its claw, as long as the middle one. Claws slender, acute, curved; that upon the hind toe larger, and in old birds much longer than the rest. The *Linnets* are placed by Mr SWAINSON in this Subfamily, of which they constitute an aberrant form. To the genus *Carduelis* the present one is closely allied through *Linaria minor*, whose bill approaches in form and shape to that of the *Carduelis spinus*. Linnets associate in large flocks, feeding upon seeds. The species whose habits confine them more to the ground than the others, live upon the oleaginous seeds of cruciform plants; the arboreal or perching kind seek those of the birch, elm, alder, &c.

COMMON OR BROWN LINNET.

LINARIA CANANBINA, Sw.

PLATE LV. FIG. 3. 4.

Fringilla cannabina, *Linn.* Syst. 1. p. 322. sp. 28.
Gros-Bec Linotte, *Temn. Man d'Ornith.* v. 1. p. 364.
Greater Redpole, or *Brown Linnet*, *Mont. Ornith. Dict.*
The Linnet, *Low's Faun. Orcad.* p. 63.
Greater Redpole Finch, *Shaw's Zool.* v. 9. p. 516.

Fringilla Linota, *Gmel. Syst.* 1. p. 916.—*Lath. Ind. Ornith.* v. 1. p. 457.
 sp. 81.

Linaria, *Raii Syn.* p. 80. A. 1.—*Will. p. 190.*—*Id. (Vog.) 258.*—*Briss. 3.*
 p. 131. 29.

La Linotte ordinaire, *Buff. Ois.* v. 4. p. 58. t. 1.—*Id. Pl. Enl. 151.* f. 1.
Common Linnet, *Br. Zool.* No. 130.—*Lewin's Br. Birds*, 2. t. 83.—*Lath.*
 Syn. 3. p. 402. 73.—*Pult. Cat. Dorset.* p. 12.—*Walc. Syn. t. 221.*

Grey Linnet, *Bewick's Br. Birds.* 1. p. 171.

Fringilla cannabina, *Gmel. Syst.* 1. p. 916. sp. 28.—*Lath. Ind. Ornith.* v. 1.
 p. 458. sp. 82.

Linaria rubra major, *Briss. 3.* p. 135. 30.—*Raii Syn.* p. 91. A. 2.—*Will.*
 p. 191. t. 46.

Le Grand Linotte des Vignes, *Buff. Ois.* v. 4. p. 58.—*Id. Pl. Enl. 485.*
 f. 2. old male under the title of *Petite Linotte des Vignes*.

Bluthanfling, *Bechst. Naturg. Deut.* v. 3. p. 141.—*Id. Tasschenb. Deut.*
 p. 121.—*Meyer*, *Tasschenb. Deut.* v. 1. p. 163.—*Id. Vog. Deut.* v. 1.
 t. f. 1. and 2.—*Frisch. Vog. t. 9. f. 1. and 2.*

Greater Redpole or *Red-headed Linnet*, *Br. Zool.* 1. No. 131. t. 54.—*Arct. Zool.* 2. No. 161.—*Will. (Ang.) 260.*—*Lewin's Br. Birds*, 2. t. 84.
Lath. Syn. 3. p. 304.—*Id. Sup. p. 167.*—*Walc. Syn. 2. t. 222.*—*Pult.*
Cat. Dorset. p. 12.—*Bewick's Br. Birds*, v. 1. t. p. 173.—*Id. Sup. p. t. 22.*

Syn. of young
Male after
first autumnal
moult.

Syn. of adult
Male in summer
plumage.

PROVINCIAL—Greater Redpole, Rose Linnet, Grey Linnet.

THIS bird has been considered by most of our authors as two distinct species, under the titles of the Common or Brown Linnet and the Greater Redpole. This error has evidently arisen from the altered appearance it bears at particular ages, and during the different seasons of the year. These changes in all probability had not been suspected, as they certainly had not been traced by the earlier naturalists, and on the authority of their reputation, succeeding writers sanctioned such mistakes, without giving themselves the trouble of farther

investigation, till MONTAGU, who united practical research with scientific knowledge, professed (in the Ornithological Dictionary) his conviction of their forming but one species; and my own observation and experiments tend to confirm his opinion. Mr BEWICK, however, in the Supplement to his work on British Birds, still continues to believe in the existence of two distinct species, for so we must understand him (although he has brought the synonyms of the two supposed species), since in a note following the description and figure of his Greater Redpole or Brown Linnet, he says that "it loses the red breast in autumn, and regains it in spring; in this it differs from the Grey Linnet, whose plumage remains the same at all seasons." From his description of the Grey Linnet (the usual *Northumbrian* name of this bird) as given in the first volume of his work, it can be no other than the Common or Brown Linnet of a particular age, although he has attached to it the Linnean synonyms of the Lesser Redpole.

If Mr BEWICK's observations on the plumage of the Linnet were made upon caged birds, I am not surprised at his assertion of its always retaining the same appearance, for I have repeatedly verified the fact of its never acquiring, under confinement, those brilliant tints which distinguish it, at a particular period of the year, when in a state of liberty. I will adduce one instance strikingly to the point in question. For some particular purpose of observation, a Linnet was shot more than two years ago, towards the close of summer, when the plumage shewed its most perfect nuptial tint; and happening to be only winged, it was put into a cage, where it soon became familiarized to its situation, and still continues. About the usual time, in the autumn of that year, it moulted, and acquired the winter dress of the Common Linnet, which it has retained ever since, without displaying, at the accustomed season, any of the brilliant red that adorned it in the wild state. This Linnet is very common throughout Britain, extending as far as to the Orkneys,

where it is abundant. During the summer it resorts to waste lands and commons, in the upper parts of the country, where it breeds.

The nest is generally built in furze, if convenient, or in some other low bush, and is formed of moss and stalks of grass interwoven with wool, and lined with hair and feathers. The eggs are four or five in number, of a bluish-white, speckled with purplish-red colour. In winter these birds assemble in very large flocks, and descend to the sea-coasts, where they continue to reside till spring again urges them to pair, and seek their upland haunts.—They feed upon the Food. smaller class of seeds, as of the flax, thistle, dandelion, &c., and particularly on those of the cruciform plants.

The song of the Linnet, although short, possesses much sweetness; and its owner is, on this account, frequently kept in a state of confinement.

PLATE 45. Fig. 3. Male bird, in the summer plumage, and of the natural size.

Bill deep bluish-grey; not so much compressed towards the point as that of *Linaria minor*. Forehead and breast of a bright carmine-red. Throat and under part of the neck yellowish-white, streaked with brown. Crown of the head, nape and sides of the neck, bluish-grey; in many instances varied with a few darker streaks. Back, scapulars, and wing-coverts, chestnut-brown, with the margins of the feathers palest. Flanks pale brownish-red. Middle of the belly and the vent greyish-white. Quill-feathers black, with more or less white on the basal-half of their webs, and forming a distinct bar across the wings, when closed. Tail considerably forked, with the two middle feathers wholly black, and pointed; the rest black, margined both on their inner and outer webs with white. Legs and toes brown.

In younger individuals, the red upon the breast and head is not so pure in tint, nor to the same extent as in the

older birds. The grey upon the crown of the head and the neck is also more varied with spots and streaks.

Fig. 4. The female. Natural size.

Female.

Inferior in size to the male bird. Head and upper parts of the body umber-brown; the margins of the feathers passing into yellowish-brown. Wing-coverts chestnut-brown. Throat and sides of the neck yellowish-white, streaked and varied with yellowish-brown. Breast and flanks pale reddish-brown, streaked with umber-brown. Middle of the belly yellowish-white.

Male bird
in winter
plumage.

The winter-plumage of the male (after the first year) is nearly as follows: Crown of the head variegated with large black spots, which occupy the centre of the feathers. Back and scapulars chestnut-brown, but deeply margined with pale yellowish-brown. Breast reddish-brown, with the tips of the feathers reddish-white. Flanks with large oblong-brown streaks.

MOUNTAIN LINNET OR TWITE.

LINARIA MONTANA, Ray.

PLATE LV. FIG. 5.

Linaria montana, Briss. 3. p. 145. 38.—*Raii Syn.* p. 91. A. 4.—*Will.* p. 191. *Fringilla montium, Gmel. Syst.* 1. p. 917. sp. 68.—*Lath. Ind. Ornith.* v. 1. p. 459. sp. 84.

Gros-bec à gorge rouge, ou de Montaign, *Temm. Man. d'Ornith.* v. 1. p. 368. *Arktische Fink,* *Bechst. Tasschenb.* p. 125. t. 9.—*Id. Naturg. Deut.* v. 2. p. 139.

Gelbschnabliche Fink, *Naum. Vög.* t. 20. f. 39.—*Frisch.* t. 10. f. 1. female. *Mountain Linnet,* *Br. Zool.* No. 133. t. 53.—*Will.* (Ang.) p. 261.—*Arct. Zool.* 2. p. 380. C.—*Lath. Syn.* 3. p. 307. 76.—*Lewin's Br. Birds,* 2. t. 86.—*Pult. Cat. Dorset.* p. 13.—*Bewick's Supp. to Br. Birds,* t. p. 24. *Twite,* *Mont. Ornith. Dict.* v. 2.—*Low's Faun. Orcad.* p. 64.—*Shaw's Zool.* v. 9. p. 521.

THIS, like the preceding species, is subject, during a certain period of the year, to a change in the colour of its feathers on particular parts of the body, rendering its summer

appearance different from that which it bears through the rest of the year. It is rather larger than the Common Linnet, being bulkier in the body, and having a longer tail. During summer it frequents the mountainous districts of England and Scotland, where it breeds; and it is found to extend as far as to the Shetland Isles.

The nest is placed amid the tops of the tallest heath, and *Nest, &c.* is composed of dry grass and heather, lined with wool, fibres of root, and the finer parts of the heath; and the four or five eggs it contains are of a pale bluish-green colour, spotted with pale orange-brown. It leaves the mountains in autumn, assembling in flocks, which associate and travel with the Common Linnet, and are taken with them by the London bird-catchers, who can readily distinguish when there are any *twites* in a flock, by their peculiar note, expressive of that word.

The species is abundant in Norway, Sweden, and other regions extending to the Arctic Circle; but is rare, and only known as a bird of passage, in the warmer parts of Europe.

Its food is the same as that of the Common Linnet.

Food.

PLATE 55. Fig. 5. The male in summer plumage, and of the natural size.

Bill wax-yellow. Throat and sides of the head pale red-dish-brown. Crown of the head and the back part margined with yellowish or pale reddish-brown. Rump fine purplish-red. Greater wing-coverts edged with white. Quills dusky; the primary ones margined with pale brown; the secondary with white on their outer webs. Breast and sides yellowish-brown, with streaks of a darker shade. Middle of the belly and the vent greyish-white. Tail forked, brownish-black, margined on the outer and inner webs with white. Legs and toes blackish-brown.

General description.

The female is without the purplish-red upon the rump; and the centres of the feathers upon the upper parts are

brown instead of black. Her bill is yellowish, tipped with brown.

LESSER REDPOLE LINNET.

LINARIA MINOR, Ray.

PLATE LIV. FIG. 10.

Linaria minor, North. Zool. 2. 267. No. 80.

Fringilla Linaria, *Linn. Syst.* 1. p. 322. 29.—*Fauna Suec.* No. 241.—*Gmel. Syst.* 1. p. 917. sp. 29.—*Lath. Ind. Ornith.* v. 1. p. 458. sp. 83.

Linaria rubra minor, *Raii Syn.* p. 91. A. 9.—*Will. p. 176. t. 43.*—*Briss.* 3. p. 138. 31.

Fringilla flavirostris, *Linn. Syst.* 1. p. 322. 27.—*Gmel. Syst.* 1. p. 915. sp. 27.—*Lath. Ind. Ornith.* 438. sp. 16. syn. of young.

Le Cabaret, *Buff. Ois.* v. 4. p. 76.—*Id. Pl. Enl.* 485. f. 2. male.

Gros-Bec Sizerin, *Temm. Man. d'Ornith.* v. 1. p. 373.

Petite Linotte des Vignes, *Briss. v. 3.* p. 138. old male.

Bergreisig, *Bechst. Naturg. Deut.* v. 3. p. 879.—*Meyer, Tasschenb. Deut. v. 1.* p. 171.—*Frisch. Vög. t. 10. f. 2.*

Lesser Red-headed Linnet or Redpole, *Br. Zool.* No. 132. t. 54.—*Arct. Zool.* 2. No. 305. 75.—*Will. (Ang.)* 260. t. 46.—*Lath. Syn.* 3. p. 305.—*Id. Sup.* p. 167.—*Lewin's Br. Birds*, 2. t. 85.—*Mont. Ornith. Dict.* 62.—*Walc. Syn.* 2. t. 223.—*Pult. Cat. Dorset.* p. 12.—*Bewick's Br. Birds*, p. t. 174.—*Shaw's Zool.* v. 9. p. 519. t. 70. copy from *BEWICK*.—*Low's Faun. Orcad.* p. 64.

Arctic Finch, *Arct. Zool.* 2. p. 379. A.—*Lath. Syn.* 3. p. 260. 12.

THIS bird is considerably less than the Common and Mountain Linnets*, and although, like them, subject to a partial change of colour at a particular season, may be readily distinguished from them, as well by other peculiar characteristics as by its inferiority of size. It is only known in the southern parts of Britain as a winter visitant, and is

* A large variety of this species is noticed by TEMMINCK, and which is sometimes met with in this country. I have accordingly represented an individual of this variety (Plate 53 ** Fig. 2.) from a specimen in the collection of Sir WILLIAM JARDINE, Bart. In size it nearly equals the Common Linnet, but the markings and colour are those of the Lesser Redpole.—1833: I am now inclined to think that these birds will not be of a distinct species, but only extra-sized specimens of the female of *Lin. minor*.

at that period gregarious, and frequently taken in company with the other species by the bird-catchers, by whom it is called the *Stone Redpole*. In the northern counties of England, and in Scotland and its isles, it is resident through the year. It retires, during the summer, to the underwood that covers the bases of many of our mountains and hills, and that often fringes the banks of their precipitous streams ; in which sequestered situation it breeds.—The nest is built in Nest, &c. a bush or low tree (such as willow, alder, or hazel), of moss and the stalks of dry grass, intermixed with down from the catkin of the willow, which also forms the lining, and renders it a particularly soft and warm receptacle for the eggs and young. From this substance being a constant material of the nest, it follows that the young are produced late in the season, and are seldom able to fly before the end of June or the beginning of July. The eggs are four or five in number ; their colour pale bluish-green, spotted with orange-brown, principally towards the larger end. In winter the Lesser Redpole descends to the lower grounds, in considerable flocks, frequenting woods and plantations, more especially such as abound in birch or alder trees, the catkins of which yield it a plentiful supply of food.—When feeding, its Food. motion affords both interest and amusement; since, in order to reach the catkins, which generally grow near the extremities of the smaller branches, it is obliged, like the Titmouse, to hang with its back downwards, and assume a variety of constrained attitudes, and, when thus engaged, it is so intent upon its work, as frequently to allow itself to be taken by a long stick smeared with bird-lime, in which way I have occasionally captured it when in want of specimens for examination. It also eats the buds of trees, and (when in flocks) proves in this way seriously injurious to young plantations. Its call-note is very frequently repeated when on wing, and by this it may always distinguished from the other species. The notes it produces during the pairing season, although

few, and not delivered in continuous song, are sweet and pleasing.

This bird is widely diffused through all the northern parts of Europe; inhabits Northern Asia as far as Siberia and Kamtschatka; and is also abundant in North America.

PLATE 54. Fig. 10. A male bird, in spring plumage, and of the natural size.

General description.

Male bird.

Bill having the upper part of the superior mandible blackish-brown; the cutting edges and inferior mandible straw-yellow. Forehead, space between the bill and eyes, chin, and throat, dusky hair-brown. Crown of the head blood-red; sides of the neck and breast carmine-red; passing into peach-blossom red upon the sides and flanks. Middle of the belly, vent, and under-tail-coverts white; in some specimens slightly tinged with peach-blossom red. Occiput, nape of the neck, and upper part of the back, blackish-brown; the feathers being margined with yellowish and wood browns. Lower part of the back and rump greyish, more or less tinged with pale carmine-red. Wing-coverts blackish-brown, margined and tipped with pale yellowish-brown. Quills hair-brown; margined with reddish-white. Tail the same, and considerably forked. Legs and toes blackish-brown.

Female.

In the female, the forehead has the brown mixed with yellowish-white. The lower part of the neck, and upper part of the breast, are of pale wood-brown, with a few spots of blackish-brown. Lower part of the breast and belly white, very slightly tinged with rose-red. The plumage of the upper parts of the body margined paler than that of the male. The rump slightly tinged with rose-red.

GENUS COCCOTHRAUSTES, *BRISS.* GROSBEAK.

GENERIC CHARACTERS.

BILL conical, very thick, bulging at the base, and rapidly tapering to the point. Culmen rounded; commissure slightly arched. Lower mandible of nearly equal thickness with the upper; its cutting edges inflected, and fitting within those of the upper. Nostrils basal, lateral, oblique, oval, hidden by incumbent bristles. Wings long and acuminate; with the second and third quill-feathers of nearly equal length, and rather longer than the first. Tail short, more or less forked. Legs having the tarsi short, or not exceeding the middle toe in length. Feet with the outer toe a little longer than the inner one; hind toe strong, with a broad sole. Claws sharp and curved; that of the hind toe longer and thicker than that of the middle one.

This genus, one of the typical forms of the present sub-family, contains several species besides the Common Grosbeak or Hawfinch, and the Green Grosbeak, both known as British birds. By the power of their massive horny bill, the larger species are enabled to break the shells of the harder kinds of seeds and berries, upon which they principally subsist. The genus possesses an extensive geographical range, several species being found not only in different parts of the Old World, but also in America, where *Coccothraustes vespertina* of COOPER appears true to the type.

H A W F I N C H .

COCOTHTRAUSTES VULGARIS, Flem.

PLATE LV. FIG. 1.

Coccothraustes vulgaris, *Flem.* Br. Anim. 12. 3. No. 93.Fringilla Coccothraustes, *Temm.* Man. d'Ornith. v. 1. p. 344.Loxia Coccothraustes, *Linn.* 1. p. 299.—Fauna Suec. No. 222.—*Gmel.* Syst. 1. p. 844. sp. 2.—*Raii* Syn. p. 85. A. 1.—*Will.* p. 150.—*Briss.* 3. p. 219. 1. Le Gros-bec, *Buff.* Ois. v. 3. p. 44. t. 27. f. 1.—*Id.* Pl. Enl. 99. and 100.—*Temm.* Man. d'Ornith. v. 1. p. 344.Kirsch Kernbeisser, *Bechst.* Naturg. Deut. v. 3. p. 35.—*Meyer*, Tasschenb. v. 1. p. 143.—*Frisch.* t. 4. f. 2. A, B.Appel-vink, *Sepp.* Vög. v. 2. t. p. 137.Grosbeak or Hawfinch, *Br.* Zool. No. 113.—*Arct. Zool.* 2. p. 354. C.—*Will.* (Ang.) p. 244. 44.—*Albin.* 1. t. 56.—*Lewin's Br. Birds*, 2. t. 67.—*Lath.* Syn. 3. p. 109. 4.—*Id.* Supp. p. 148.—*Mont. Ornith. Dict.* v. 1.—*Pult. Cat.* Dorset. p. 11.—*Walc.* Syn. 2. t. 206.—*Don. Br. Birds*, 2. t. 43.—*Bewick's Br. Birds*, t. 1. p. 133.—*Shaw's Zool.* v. 9. p. 236. pl. 42.

Occasional visitant. THIS bird only occasionally visits the British Isles during the months of winter, and its appearance is almost entirely confined to the southern parts of the kingdom, as I have very rarely met with it in any of the northern counties.

Food. It does not associate in large flocks, like most of its tribe; at least if any judgment may be formed during its sojourn in this country, as the numbers seen together seldom amount to more than ten or twelve, and not often to so many.—Here it subsists chiefly upon the fruit of the white thorn, the stones of which it breaks with the greatest ease, by means of its strong and massive bill. In its native haunts, the seed of the platanus, kernels of cherry-stones, almonds, and other stone-fruit, furnish its principal support.

It is a plentiful species in some districts of France, and is common in the mountainous regions of Italy, in Germany, Sweden, and part of Russia.

Nest, &c. It builds in the upper branches of trees, and forms a nest of beautiful construction from lichens and vegetable fibres, lined with feathers and other soft materials.* Its eggs are

* It has, I understand, been found breeding in Windsor Forest.—1833.

from three to five in number, of a yellowish-grey colour, with spots and streaks of brown and blackish-grey. It is probable that in the pairing season it utters a superior song, as MONTAGU says that, even in winter, during mild weather, he has heard it sing sweetly in low and plaintive notes.

PLATE 55. Fig. 1. Natural size.

Bill, in the living bird, pinkish-white, but changing, after General death, to a yellowish or pale brown. Irides ash-grey. descrip-
tion.
Base of the bill, space between it and the eyes, chin and throat black. Crown of the head, cheeks, rump, and upper tail-coverts, pale chestnut-brown, tinged with grey. Collar round the nape of the neck bluish-grey. Back and smaller wing-coverts, very deep reddish-brown, then a succeeding row of white, forming an oblique bar across each wing. Secondary, and part of the primary quills, glossy black, with a purplish tinge, singularly cut or truncated at their points; and with a white oblong spot in the centres of their inner webs; the rest of the quills entirely black. Tail, having the four middle feathers white, with black bases; the rest with their inner webs half white half black, and their outer ones entirely black. Breast and belly pale brownish-purple-red. Vent and under tail-coverts white. Legs wood-brown.

GREEN GROSBEAK.

Coccothraustes chloris, Flem.

PLATE LIV. FIG. 3.

Coccothraustes chloris, Flem. Br. Anim. 1. 83. No. 99.*Fringilla chloris, Temm.* Man. d'Ornith. v. 1. p. 346. 2.*Loxia chloris, Linn.* Syst. v. 1. p. 304. sp. 27.—*Lath.* Ind. Ornith. v. 1. p. 382
sp. 39.—*Raii*, Syn. p. 85. A.—*Will.* p. 129. p. 44.—*Briss.* 3. p. 190. 54.*Le Verdier, Buff.* Ois. v. 4. p. 172. t. 15.—*Id.* Pl. 267. f. 2. male.*Gros-bec Verdier, Temm.* Man. d'Ornith. v. 1. p. 346.*Gruner Kernbeisser, Bechst.* Naturg. Deut. v. 3. p. 45.—*Frisch*, t. 2. f. 2.
A. B.De Groenling, *Sepp.* Nederl. Vög. v. 1. t. 1. p. 73.Greenfinch or Green Grosbeak, Br. Zool. No. 117.—*Arct. Zool.* 2. p. 253.
B.—*Lath.* Syn. 3. p. 134. 36.—*Id.* Supp. p. 152.—*Albin.* 1. t. 58.—*Lewin's*
Br. Birds, 2. t. 69.—*Mont.* Ornith. Dict. v. 1.—*Pult. Cat. Dorset.* p. 11.
Walc. Syn. 2. t. 208.—*Bewick's Br. Birds*, 1. t. 136.

PROVINCIAL—Green Linnet.

AN indigenous species, and very abundant in all parts of Britain. After breeding, Green Grosbeaks begin to assemble in flocks, which continue increasing through the autumn, and become very numerous about the commencement of severe weather. They frequently congregate with Chaffinches and Yellow Buntings, and feed with them in the stubble-lands, as long as the ground remains uncovered; but, upon the first fall of snow, like other granivorous birds, they resort to the farm-yards, where they find a tolerable subsistence amongst the corn-stacks, and on the refuse from the barn. They generally roost in holly bushes, or in the warm and sheltered retreat of fir-trees; and, previous to retiring to rest, quitting the company of their extraneous associates, they make many circular flights in a compact body round their sleeping station, before they settle for the night. The natural notes of this species are few, and it produces nothing worthy of the name of song; it is, however, capable of imitating the notes of other birds, when in a state of confinement, to which it becomes very speedily accommodated. It is a late

breeder, the nest seldom being finished before the latter part of May or the beginning of June.—This is composed of moss Nest, &c. and wool interwoven, with a lining of hair and feathers, and usually placed in a thick hedge, or bush, but occasionally in the ivy encircling some tree. The eggs are four or five in number, of a bluish-white, speckled at the larger end with light orange-brown.

It feeds upon all seeds (particularly the oleaginous kinds) Food. and grain, and is found throughout the greatest part of Europe.

PLATE 54. Fig. 3. Natural size.

Upper parts of the body bright oil-green, passing into sulphur-yellow, the feathers margined with ash-grey. General description.

Greater wing-coverts and secondaries smoke-grey; the latter with their centres blackish-grey. Greater quills blackish-grey, with their outer webs gamboge-yellow. Tail, having the middle feathers blackish-grey, margined with yellowish-grey; the outer feathers with their exterior webs gamboge-yellow. Bill pinkish-white. Legs pale wood-brown, tinged with flesh-coloured red.

Of the female, the upper parts of the body are oil-green, tinged with sulphur-yellow. Flanks grey. The yellow edging upon the outer webs of the greater quills and tail-feathers are not so bright as in the male.

SUBFAMILY PYRRULINA, Vig.

THIS subfamily, of which the Bullfinches and other nearly allied genera are the typical representatives, forms another aberrant group of the *Fringillidae*. A considerable modification in the structure of the bill is seen in these birds, as compared with that member in the typical Finches and Grosbeaks; the upper mandible being much curved, and its tip projecting beyond, and hanging over that of the lower. In

habits they also vary; and many species subsist as much upon the tender and undeveloped buds of trees, as upon seeds and the kernels of fruits. In addition to the Bullfinches, the Crossbills (*genus Loxia*) belong to this group, as also the genera *Pitylus* (Cuv.), *Bethylus* (Cuv.), and *Phytotoma* (GMEL.), which last appears to be an aberrant form, serving as a medium to connect the Fringillidæ with the *Musophagidæ*.

GENUS LOXIA, BRISS. CROSSBILL.

GENERIC CHARACTERS.

BILL rather long; thick at the base. Both mandibles equally convex and very strong, much compressed anteriorly; when at rest, crossing each other at the points; and having their tomia, from the middle forward, bending inwards. Nostrils round, basal, and lateral; hidden by incumbent bristly feathers. Feet, with three toes before, and one behind, the anterior ones entirely divided. Claws curved, and sharp. Wings having the first and second quills of equal length, the third being the longest.

The genus *Loxia* of the older authors has undergone a very judicious revision, and the Bullfinches and Grosbeaks, which were included in it, have been classed more suitably according to the characters they possess. There are but three members of the genus as at present established. They are inhabitants of the northern parts of Europe, and of North America, living in the forests of pines and firs so abundant in these countries; and the seeds of which trees form their chief food. These they are enabled to arrive at by the powerful lever they possess in their singular bill, so admirably adapted for wrenching open the scales of the

fruit.* Their period of nidification is unusual, being in the middle of the winter months. During summer they retire farther to the northward.

COMMON CROSSBILL.

: *Loxia curvirostra, Linn.*

PLATE LIII.

Loxia curvirostra, Linn. Syst. 1. p. 299. 1.—*Gmel.* Syst. 1. p. 843. sp. 1.—*Lath.* Ind. Ornith. v. 1. p. 370. sp. 1.—*Cuv.* Reg. Anim. v. 1. p. 391.
Loxia, Raii Syn. p. 86. A.—*Will.* p. 181. 1. 44.—*Briss.* 3. p. 299. t. 17. f. 3.
Le Bec croisé, Buff. Ois. v. 3. p. 449. t. 27. f. 2.—*Id.* Pl. Enl. 218.
Bec croisé commun, ou des Pins, Temm. Man. d'Ornith. v. 1. p. 328.
Fichten Kreuzschnabe, Bechst. Naturg. Deut. v. 3. p. 4. t. 3. f. 1.—*Meyer,*
Tasschenb. Deut. v. 1. p. 140.—*Id.* Vög. Deut. v. 1. figures of different
ages.
Crossbill or Sheld Apple, Br. Zool. 1. No. 115. t. 49.—Arct. Zool. 2. No. 208.—*Will.* (Ang.) p. 248. t. 44.—*Lath.* Syn. 3. p. 106. 1.—*Lewin's Br.*
Birds, 2. t. 66.—*Mont.* Ornith. Dict. v. 1.—*Albin.* 1. t. 61.—*Walc.* Syn.
2. t. 205.—*Pult.* Cat. Dorset. p. 11.—*Bewick's Br. Birds*, 1. p. t. 130.—
Shaw's Zool. v. 9. p. 231. t. 41.

THE visits of this curious and interesting species to our occasional shores are at irregular periods, sometimes at an interval of many years. During the summer of 1821, this kingdom was visited by immense flocks of these birds, that spread themselves through the country, and were to be seen in all woods and plantations where the fir-tree was abundant. Their first appearance was early in June, and the greater part of the flocks seemed to consist of females, and the young of the year (the males possessing the red plumage, assumed from the first moult to the end of that year). Many of the females that I killed shewed plainly, from the denuded state of their breasts, that they had been engaged in incubation some time previous to their arrival; which circumstance agrees

* For an excellent anatomical description of the bill and its muscles, I refer my reader to a paper (published in the 4th vol. of the "Zoological Journal") by Mr YARRELL, entitled "On the Structure of the Beak, &c. in the Crossbill (*Loxia curvirostra*)."

with the account given of the early period at which they breed in the higher latitudes. They continued with us till towards the autumn, but kept moving northward, as I found them, in September, particularly abundant in all the fir tracts of Scotland, after they had nearly disappeared to the southward of the River Tweed. Since that time we seem not to have been revisited by these birds; at least none have come under my observation.*

In the southern parts of the kingdom, during their occasional visits, they commit great havoc, in the apple and pear orchards, by splitting the fruit in halves, for the sake of the Food. inclosed pips. Their principal support, however, is derived from the seeds of the various firs, which they easily obtain by the lateral expansion of their bill, when inserted between the scales of the cone.

The manners of these birds are interesting when in a state of confinement (to which they become speedily accustomed), as they strongly resemble the parrot tribe in climbing along the wires of the cage in any direction, by means of their bill and claws. The call-notes of the Crossbill are a kind of twitter, which it constantly repeats when feeding; and a louder one, uttered when on wing, not unlike that of the Greenfinch, but rather shriller. According to WILLOUGHBY, and the older authors, it also possesses a pleasant song, only heard during the winter months, or season of incubation.

It is a native of the pine forests of Germany, Poland, Sweden, and other northern countries, breeding (as before stated) during the winter, or the earliest period of spring.—Nest, &c. The nest is placed in the fork of a branch, and composed of moss, lichens, &c. lined with feathers. The eggs are four or five in number, greyish-white, marked at the larger end with irregular patches of arterial blood-red, with smaller specks dispersed over the other parts. According to TEMMINCK, and other eminent continental ornithologists the “*Loxia cur-*

* Since the publication of the first edition of this volume, Crossbills have repeatedly visited us, but never in such numbers as in the year 1821.

virostra" *major* of GMELIN and LATHAM, considered as a variety, is in fact distinct; and, from its peculiar characters being well-defined and invariable, ought not to be confounded with the present species. The above mentioned bird must, doubtless, have been the supposed variety of the Crossbill mentioned by PENNANT; and which he describes as larger, and very rare; with the bill remarkably thick and short, more arched than that of the "Curvirostra," and having the ends of the mandibles not so sharp, nor drawn to so fine a point. The specimens received by him (a male and female) were killed in Shropshire; from whence it would appear that this species (*Loxia pytiopstittacus* of TEMMINCK) is entitled to rank in the British Fauna, as an occasional visitant.

The Common Crossbill is of a thick form; its legs are strong, but short, and with long and hooked claws, well adapted for taking firm hold.

The muscles attached to the bill are very powerful, giving a large and disproportionate appearance to the head. The crossing of the mandible is not always on the same side, as I have repeatedly observed in the specimens killed, and have accordingly thus represented in the plate.

It is found in the countries of Europe before mentioned, in Asia, and also in North America.

PLATE 53. Figures of the natural size; the upper representing the young male; the lower one the female bird.

Bill greyish-black. Upper and lower parts tile-red, intermixed with yellowish-grey. Quills and tail greyish-black, margined with yellowish-white. Legs and toes brown.—This is the plumage of the male from the first moult till he is one year old, when he acquires the dress of the adult bird; in which state the tile-red has given place to ash-grey, deeply tinged and tinted with sulphur and lemon yellows.

The prevailing colour of the female is a greenish-grey, va-

General description.
Male.

Female.

ried by smoke-grey; with the rump deep primrose-yellow, and the under parts more or less streaked with blackish-grey.

PARROT-CROSSBILL.

LOXIA PYTIOPSITTACUS, Bechst.

PLATE LIII**. FIG. 1.

Loxia Pytiopsittacus, Bechst. Tasschenb. Deut. v. 3. p. 106.

Bec croisé perroquet, ou des Sapins, Temm. Man. d'Ornith. v. 1. p. 325.

Loxia curvirostra major, Gmel. Syst. 1. p. 843. sp. 1. var. 2.—*Lath.* Ind. Ornith. v. 1. 371. sp. 1. var. y.

Crucirostra pinetorum, Meyer, Vög. Liv. und. Esthl. p. 71.

Kiefern Kreuzschnabel, Bechst. Naturg. Deut. v. 3. p. 20. t. 32. f. 2. & 3.

Grosschnabiger Kernbeiser, Meyer, Tasschenb. Deut. v. 1. p. 137.—*Id.* Vög. Deut. v. 1. t. f. 1. old male.

THE probability suggested, in the history of the Common Crossbill, that another species might be entitled to a place in the British Fauna, has been now placed beyond doubt; and, through the kindness of a scientific friend, Sir WILLIAM JARDINE of Jardine Hall, in Dumfriesshire, I am enabled to give a figure of the species in question, which will exhibit, better than any description, the characteristic difference between it and the common one. This specimen was procured by Sir WILLIAM from Mr D. Ross, gunmaker in Edinburgh (a person well acquainted with most of the feathered inhabitants of our islands, and one of the best preservers of animals in the kingdom), to whom it had been sent from Ross-shire, along with several others; but he cannot now say whether they were all of the same species.

Another very mutilated specimen of this bird is in the Edinburgh Museum.

Occasional visitant. In its manners it resembles the other species of this singular genus, and, like them, inhabits the pine forests of the Arctic Regions. According to TEMMINCK, it visits Poland, Prus-

sia, and other parts of Germany, during the winter months, and breeds at that season. The eggs are stated to be four or five in number, of an ash-grey colour, marked at the greater end with large irregular spots of blood-red, and over the rest of the surface with minute specks of the same. Eggs.

The species appears to be the same in North America.

PLATE 53 **. Fig. 1. Natural size,

Bill very strong, five-eighths of an inch deep, shorter than the middle toe, much hooked, and the crossing point of the lower mandible not reaching so high as the ridge of the upper one; but in the Common Crossbill it comes beyond that part. Head large. Body thick, and considerably exceeding in size that of the common species. The whole of the upper and under parts of the body has an intermixture of tile-red, sulphur and wax yellows, and greys. Wings deep hair-brown. Greater coverts and quills tinged and margined with wine-yellow. Tail the same as the wings. Legs and toes yellowish-brown. Claws black.

General description.

This appears to be a young male, as it answers to TEMMINCK's description of the bird at a year old. According to that author, the plumage of the old male is principally of an oil-green colour, tinged with grey. The throat and sides of the neck bluish-grey. Rump sulphur-yellow, inclining to lemon-yellow. Breast and belly the same, but mixed with grey. Flanks with streaks of blackish-grey.

GENUS PYRRHULA, BRISS. BULLFINCH.

GENERIC CHARACTERS.

BILL very thick at the base, short, the sides inflated; both mandibles convex, particularly the upper one, the tip of which overhangs the point of the lower. Culmen rather

compressed, and advancing upon the forehead. Nostrils basal, lateral, round, in general concealed by the feathers at the base of the bill. Feet having the tarsus shorter than the middle toe. Toes three before and one behind, divided. Wings rather short, and with the fourth quill-feather the longest.

The birds of this genus are, in their mode of life, nearly allied to the Crossbills. They are chiefly natives of the colder and temperate parts of Europe, Asia, and America. Their food consists of the buds of various trees, as well as the hardest seeds and fruits, which they are enabled to break by their horny strong bill, the peculiar convexity of which distinguishes them from the rest of the Fringillidæ. Most of the species are subject to a double moult, and the males are easily to be distinguished from the females, by the brighter colours of their plumage.

PINE BULLFINCH.

PYRRHULA ENUCLEATOR, Temm.

PLATE LIII*. FIGS. 1, 2.

Pyrrhula enucleator, Temm. *Man. d'Ornith.* v. 1. p. 383.

Loxia enucleator, Linn. *Syst.* 1. p. 299. 3.—*Gmel. Syst.* 1. p. 845. sp. 3.—*Lath. Ind. Ornith.* v. 1. p. 372. sp. 5.

Coccothraustes Canadensis, Briss. 3. p. 250. 15. t. 12. t. 3.

Le Dur-bec du Canada, Buff. *Ois.* v. 3. p. 457.—*Id. Pl. Enl.* 137. f. 1. male one year old, and *Pl. Enl.* 124. old female.

Haaken Kernbeiser, *Bechst. Naturg. Deut.* v. 3. p. 28.—*Meyer, Tasschenb. Deut.* v. 1. p. 142.—*Id. Vög. Deut.* v. 1. t. f. 1. year old male; f. 2. old female.

Pine Grosbeak, Br. *Zool.* No. 114. t. 49. f. 2.—*Arct. Zool.* 2. No. 209.—*Lewin's Br. Birds*, 2. t. 68.—*Mont. Ornith. Dict.* v. 1.—*Walc. Syn.* t. 207.—*Don, Br. Birds*, 1. t. 17.—*Bewick's Br. Birds*, 1. p. 135.—*Shaw's Zool.* v. 9. p. 238. t. 43.

Occasional visitant. THIS beautiful species seldom visits our island, and even then its range is limited to the northern districts of Scotland, where the pine is the natural produce of the country. In

such a situation, viz. in the magnificent grounds of Invercauld in Aberdeenshire, PENNANT mentions having met with these birds, and further states his belief that they bred there, from having seen them early in the month of August. Such a conclusion, however, ought scarcely to be inferred from this fact, as a sufficient interval of time had elapsed for these individuals to have emigrated from Norway, or other northern countries, to Scotland, after incubation, as they are known to breed as early as May in their native haunts.

I have made many inquiries respecting these birds, during excursions in Scotland, but cannot learn that the nest has ever been found; and indeed from the intelligence obtained from gamekeepers, and those most likely to have made observations connected with ornithology, it appears that they are very rarely seen, and can only be regarded as occasional visitants.

They inhabit the regions of the arctic circle, and are very plentiful in Sweden, Norway, and similarly situated countries of Europe, Asia, and North America, living in the pine forests, which there cover immense tracts.—Their food consists of the seeds of the various firs and pines, as well as other alpine seeds and berries, and the buds of trees.—They build in trees, but not far from the ground, and the nest, formed Nest, &c. of dry sticks and small twigs, lined with feathers, contains generally four white eggs.

Food.

PLATE 53*. Fig. 1. A young male bird, of the natural size.

Bill black. Head, neck, throat, breast, and rump bright crimson-red. Back and scapulars black, the feathers deeply edged with crimson-red. Wing-coverts tipped with crimson, forming two bars across the wings. Quills and tail feathers greyish-black, edged with pale crimson. Flanks, belly, and vent greyish-white tinged with crimson.

General description.
Male.

In the adult male, those parts which were crimson-red in

the immature bird, exhibit a fine reddish-orange. The breast and belly are also of a pale orange ; and the bars upon the wings become white.

Fig. 2. The female. Natural size.

Female.

Head and neck clove-brown, tinged more or less with orange. The upper parts brown, tinged with ash-grey. Lower parts grey, with a slight tinge of orange. Upon the wings are two transverse greyish-white bars. Quills and tail blackish-grey, edged with oil-green, with a tinge of orange.

The young birds resemble the female, except that they show less of the orange tinge.

COMMON BULLFINCH.

PYRRHULA VULGARIS, Temm.

PLATE LIV. FIGS. 1, 2.

Pyrrhula vulgaris, Temm. Man. d'Ornith. v. 1. 330.

Loxia pyrrhula, Linn. Syst. 1. p. 300. 4.—*Fauna Suec.* No. 225.—*Gmel.* Syst. 1. p. 846. sp. 4.—*Lath.* Ind. Ornith. v. 1. p. 387. sp. 56.—*Raii* Syn. p. 86. A.—*Will.* p. 130. t. 43.

Le Bouvreuil, Buff. Ois. v. 4. p. 372. t. 17.—*Id. Pl. Enl.* 245. M. and F. *Le Bruant ecarlate, Sonn. nov. edit. de Buff. Ois.* v. 13. p. 114.

Bouvreuil commun, Temm. Man. d'Ornith. v. 1. p. 338.

Rothburstiger Gimpel, Bechst. Naturg. Deut. v. 3. p. 55.—*Meyer, Taschenb.* Deut. v. 1. p. 147.

Bullfinch, Br. Zool. 1. No. 116.—*Arct. Zool.* 2. No. 353. A.—*Albin.* 1. t. 59, 60.—*Lath.* Syn. 2. p. 143. 51.—*Id. Supp.*—*Lewin's Br. Birds,* 2. t. 70. *Mont. Ornith. Dict.* v. 1.—*Haye's Br. Birds,* t. 37.—*Walc.* Syn. t. 209.—*Pult. Cat. Dorset.* p. 11.—*Bewick's Br. Birds.* v. 1. t. p. 138.—*Shaw's Zool.* v. 9. p. 318. t. 52.

PROVINCIAL—Pope. *Flf.*

THE Bullfinch is indigenous with us, and common in all the wooded districts of these islands. It is a bird of retired habits, and does not associate with other kinds, being generally seen in pairs, or in families of five or six individuals, the brood of the year, which continue together during the

autumn and winter, till the return of spring induces them to pair, and continue their species.—The food of the Bullfinch during summer and autumn consists of seeds; but in the winter and spring, it chiefly supports itself on the buds of various trees and shrubs, particularly on those of the white thorn, all the varieties of the plum, the larch, and birch. On this account it is particularly injurious to gardens, and is often the depredator, when the comparatively innocent Blue-cap (Titmouse) suffers for the crime. I have known a pair of these birds to strip a considerable-sized plumtree of every bud in the space of two days. These buds are not swallowed whole, but first minutely divided by the tomia of their powerful bill.—The Bullfinch forms a loose shallow nest of small sticks, lined with a few fibres of root, in a low tree, or in the thickest under-wood, and lays four or five bluish-white eggs, spotted with pale orange-brown. Its usual note-call is a plaintive whistle, and, when feeding, it utters a low short twitter.—Its song is very soft and pleasing, but delivered in such an under-tone, as to be inaudible at a short distance; and from hence few common observers are aware that it possesses a native song. Under confinement it may be taught to whistle a variety of tunes, and great numbers thus educated are annually imported from Germany.—When caged, it sometimes becomes wholly black, an effect attributed to its being fed too profusely with hemp seed. In its wild state, varieties more or less white are frequently met with. Captain MITFORD (to whom I have before alluded in this work) killed one, of which both the wings were white.

It is a native of the northern parts of Europe, and is only known in the more southerly provinces as a bird of passage.

PLATE 54. Fig. 1. Male bird. Natural size.

Bill brownish-black. Crown of the head, base of the bill, throat, wings, and tail velvet-black, tinged with violet-purple. Nape of the neck and back fine bluish-grey;

General description.
Male.

the feathers silky and loose. Cheeks, neck, breast, belly, and flanks, bright tile-red. Rump and vent white. Greater wing-coverts tipped and margined with pinkish-white, forming a transverse bar across the wing. Legs blackish-brown.

Fig. 2. The female, also of the natural size.

Female. Under parts of a pale broccoli-brown, slightly tinged with tile-red. Upper parts bluish-grey, tinged with yellowish-brown. In other respects marked like the male, but with the colours not so bright.

FAMILY II.—STURNIDÆ, VIGORS.

IN addition to the true Starlings (genus *Sturnus*, Auct.) we find a considerable number of groups (some confined to the New and others to the Old Continent) allied to them in habits, and preserving a continuous chain of affinities, which together constitute the present family, considered one of the typical divisions of the *Conirostral* tribe. By Mr SWAINSON the subordinate groups that compose the circle of the family are thus named, *Sturnina* and *Lamprotornina*, the typical groups (both of which are confined to the Old World); and *Agelaina*, *Icterina*, and *Scaphadurina*, the aberrant groups. These latter belong to the American Continent, and were, for the greater part, formerly arranged by the earlier systematists in the genus *Oriolus*. By means of certain species of the subfamily *Agelaina*, in whom the bill is thick, pointed, and finch-like, and whose habits are chiefly granivorous, a close connection is sustained with the *Fringillidæ*; and the passage from the one family to the other is rendered easy and gradual. In Europe we can shew examples of but one subfamily, viz. *Sturnina*; that of *Lamprotornina* being restricted to the hot climates of Africa and Asia.

GENUS STURNUS, LINN. STARE.

GENERIC CHARACTERS.

BILL strait, conical, with the culmen flattened; rather obtuse; the base of the upper mandible advancing upon the front; the point very slightly depressed. Gape angulated. Nostrils basal, lateral, and partly closed by a prominent rim. Wings long, the first feather very short, the second and third the longest in the wing, and of nearly equal length. Tarsi strong, longer than the middle toe. Feet with three toes before and one behind; the middle toe being united to the outer one at the base. Claws tolerably strong, curved, and sharp.

Stares commonly associate and travel in societies. Insects form their chief food, but they also eat grain and other seeds. In addition to the general moult in autumn, they are subject to a change in the colour of the bill and legs, and in the lustre of their plumage, on the approach of spring, or the season of pairing. Two species of this genus are now found to inhabit Europe, *Sturnus vulgaris* and *Sturnus unicolor*; the latter lately detected in Sardinia. Other species are also found in Asia.

COMMON STARLING.

STURNUS FULGARIS, Linn.

PLATE XXXVI. FIG. 1.

Sturnus vulgaris, Linn. Syst. 1. p. 290. 1.—*Gmel.* Syst. 1. p. 801.—*Lath.* Ind. Ornith. v. 1. p. 321. 1.—*Raii* Syn. p. 67. A. 1.—*Will.* p. 144. t. 37.—*Briss.* 2. p. 439. 1.—*Id.* 8vo. 1. p. 280.
Sturnus varius, Meyer, Tasschenb. Deut. v. 1. p. 208.
L'Etourneau, Buff. Ois. v. 3. p. 176. t. 15.—*Id.* Pl. Enl. 75.
L'Etourneau vulgaire, Temm. Man. d'Ornith. v. 1. p. 132.
L'Etourneau commun, Cuvier, Reg. Anim. 1. p. 395.
Gemeiner Star, Bechst. Naturg. Deut. v. 3. p. 816.—*Frisch.* Vög. t. 217.
Stare or Starling, Br. Zool. 1. No. 104. t. 46.—*Arct. Zool.* 2. p. 331. A.—*Lewin's Br. Birds,* 2. t. 56.—*Lath. Syn.* 3. p. 2.—*Id. Supp.* p. 137.—*Will.* (Ang.) p. 196. p. 37.—*Mont. Ornith. Dict.*—*Pult. Cat. Dorset.* p. 8.—*Bewick's Br. Birds,* v. 1. p. 88.—*Id. App.* p. 14. young.—*Low's Fau. Or-* cad. p. 54.

THE Starling is widely dispersed through Great Britain, occurring as numerously in the Orkney and Shetland Isles as in the southern parts of the kingdom.

In the autumnal and hyemal months, these birds gather in immense flocks, and are particularly abundant in the fenny parts of Nottinghamshire and Lincolnshire, where they roost among the reeds. Before they retire to rest, they perform various manœuvres in the air, the whole frequently describing rapid revolutions round a common centre.

This peculiar flight will sometimes continue for nearly half an hour, before they become finally settled for the night.

Nest, &c. Upon the approach of spring they pair, and spread themselves over the country.—They build in the holes of trees, or in ruinous buildings, making an artless nest of dry grass or hay, on which four or five eggs, of a bluish-green colour, are deposited.—Their food principally consists of worms and other insects; but they also eat grain and various seeds. According to Mr Low, they feed in the Orkney Islands, during the severity of winter, upon the sea-louse (*Oniscus ma-*

rinus), which they obtain by turning over the small stones on the beach with their bills.

The Starling is a very imitative bird, and, when tamed, may be taught to articulate very distinctly, and to whistle tunes with much precision. In its wild state even, it may frequently be heard endeavouring to imitate the cries of different birds and animals. Its own peculiar notes are a shrill whistle, and chattering kind of noise. It is found throughout Europe; and the same species appears to be common also in Asia, as I have seen specimens from Nepaul that are precisely similar.—The flight of the Starling is smooth and even, without any saltatory motion; and it walks with ease, like the Lark or Wagtail, seldom or never using the hopping action of the Thrush. These birds are often seen in company with Rooks, Pigeons, and Jackdaws, and I have witnessed a small flock of them associating for a considerable time with a body of Lapwings (*Vanellus cristatus*.)

PLATE 36. Fig. 1. A male bird, of the natural size.

General plumage black, with brilliant purple and golden-green reflections, the feathers tipped with triangular white, or cream-yellow spots. Quills and tail-feathers greyish-black, with the margins pale reddish-brown. Bill lemon-yellow. Legs flesh-red; in some inclining to yellowish-brown.

General description.

The female differs in having a greater number of white spots upon the back and belly.

The young birds, previous to autumn, or the first moult, are of a uniform hair-brown colour, lightest upon the throat and under parts. In this state it has been described by MONTAGU and BEWICK as a distinct species, under the name of the *Solitary Thrush*.

GENUS PASTOR, TEMM. PASTOR.

GENERIC CHARACTERS.

BILL conical, compressed ; upper mandible slightly arched, and the point emarginated. Base of the lower mandible strong, and the gape slightly angulated. Nostrils basal, lateral, and oval, partly covered by a membrane, and clothed with small feathers. Tarsus strong, longer than the middle toe. Feet strong, gressorial ; with three toes before and one behind ; the outer toe joined at its base to the middle one. Claws rather stout, curved ; and that of the hind toe much longer than the rest. Wings having the first quill very short, and the second and third the longest.

This genus, first established by TEMMINCK, contains many of the species of the genus *Gracula* of authors, and some others, that were before improperly classed with the Starlings and Thrushes ; amongst these are the Rose-coloured Pastor, the Rose-coloured Ouzel (*Turdus roseus*), and Starling (*Sturnus roseus*), of different ornithologists.

In manners the birds of this genus greatly resemble the Starlings, with whom they frequently associate and live.

Their chief food consists of insects. They are natives of the Old Continent.

ROSE-COLOURED PASTOR.

PASTOR ROSEUS, Temm.

PLATE XXXVI. FIG. 2.

Pastor roseus, *Temm.* Man. d'Ornith 1. p. 136.Turdus roseus, *Linn.* Syst. 1. p. 294. 15.—*Gmel.* Syst. 1. p. 819. sp. 15.—
Lath. Ind. Ornith. v. 1. p. 344. sp. 59.Sturnus roseus, *Scop.* Ann. 1. No. 191.Turdus Seleucus, *Gmel.* Syst. 1. p. 837. 1. sp. 26. female.Merula rosea, *Raii* Syn. p. 67. 9.—*Will.* p. 143.—*Briss.* 2. p. 250. 20.Merle couleur de rose, *Buff.* Ois. v. 3. p. 348. 22.—*Id.* Pl. Enl. p. 251.Le Roselin, *Le Vaill.* Ois. d'Afric. v. 2. p. 96.Martin Roselin, *Temm.* Man. d'Orn. v. 1. p. 136.Rosenfarbige-Drossel, *Meyer*, Tasschenb. Deut. v. 1. p. 201.—*Bechst.* Naturg. Deut. v. 3. p. 39. 3.Rose-coloured Ouzel or Thrush, *Br. Zool.* App. No. 5. t. 5.—*Arct. Zool.*
2. p. 344. 9.—*Will.* (Ang.) p. 194.—*Lewin's Br. Birds*, 2. t. 64.—*Lath.*
Syn. p. 50.—*Mont. Ornith. Dict.*—*Wall.* Syn. 2. t. 196.—*Don.* Br. Birds,
t. 24.—*Bewick's Ar. Birds*, vol. 1. and App. with figure of male.

THIS beautiful species can only be regarded as occasionally visiting our island. The subject of the accompanying representation was shot out of a small flock of these birds, and young Starlings intermixed, upon the sea-coast near Bamburgh Castle, in the month of July 1818. Another male bird was taken, about the same time, in a tan-pit near Newcastle-upon-Tyne; and other specimens are mentioned as having been obtained in the neighbourhood of Ormskirk, in Lancashire *.—It is a native of the warmer parts of Asia and Africa, where it is very common, living and feeding with the Starling species. It is also a regular periodical visitant in Italy, Spain, and the southern provinces of France. In its mode of life, it is of great benefit in many countries, by preying on the larvæ of particular insects; in the search after Food, which it displays great assiduity, and is, on that account, highly esteemed and protected by the inhabitants.—Its nest Nest, &c.

* Another beautiful male specimen was shot at West Ord, near Berwick on Tweed, in July 1832.

is made in the holes of trees, and in old walls, but the number and colour of its eggs are not mentioned. The young, in their nestling plumage, are very unlike the parent birds, and greatly resemble the young of the Starling.

PLATE 36. Fig. 2. Natural size.

General description.

Upper mandible of the bill and the point of the lower one reddish-orange, the rest black. Irides brown. Head adorned with a long pendent crest of loose silky feathers, falling backwards, which, as well as the neck and upper parts of the breast, are of a velvet-black, with violet and green reflections. The whole of the belly and the back are of a delicate peach-blossom red. Wings and tail brownish-black, with violet reflections. Under tail-coverts and thighs black. Legs flesh-red, very strong and muscular.

The female is similar to the male bird in markings, but the crest is shorter, and the red less pure in its tint. The young of the year have the bill of a blackish-brown colour. No crest. Head, and all the upper parts of the body, hair-brown, tinged with grey. Wing-coverts edged with greyish-white. Throat, and centre of the belly white. Legs and feet wood-brown.

FAMILY III.—CORVIDÆ, LEACH.

WE now enter upon the family which forms the second *typical* group of the Conirostral tribe, and embraces, besides other genera, the greater part of those included by TEMMINCK in his order *Omnivores*. In the typical form, or True *Crows*, the bill is in the shape of a lengthened cone, very strong, and with sharp cultrated edges. The legs and feet also are strong, and fully developed, being thus equally adapted both for walking upon the ground and for perching on trees. In these birds, the appetite may be styled *Omnivorous*, as they

feed both upon animal and vegetable substances. Their near connection with the *Sturnidæ* is seen in the instance of the Crow-Blackbirds (genus *Quiscalus*), which belongs to one of the minor divisions of the latter family; and where a strong similarity to the Crows is exhibited in habits and colour, as well as in the form of the bill, which organ loses in some particulars the peculiar characteristics of that of the other *Sturnidæ*. From the want of species on which to ground a proper analysis, the whole of the five minor groups have not been satisfactorily ascertained. That of *Corvina*, containing the Crows and Pies, is however easily recognised, and may be considered as forming the first, or pre-eminently typical group, while the Jays, or subfamily *Garrulina* of SWAINSON, seems entitled to rank in the second or *subtypical* station. The genus *Frigilus* (CUVIER) is considered by both SWAINSON and VIGORS the probable representative of another subfamily, into which the Birds of Paradise and other nearly allied genera will enter. And the members of the genera *Crypsirina*, *Glaucopis*, &c. with shorter and weaker legs, will probably constitute a fourth. The fifth remains to be discovered.

GENUS CORVUS, LINN. CROW.

GENERIC CHARACTERS.

BILL strong, conical, cultrated, strait at the base, but bending slightly towards the tip; nostrils, at the base of the bill, oval, and open; covered by reflected bristly feathers. Wings pointed; the first feather being much shorter than the second and third, and the fourth being the longest. Legs and feet strong, plated, with three toes before and one behind. Claws strong, curved. Toes divided. Tarsus longer than the middle toe.

This genus is widely spread, and some of the species are

found in every quarter of the globe. In disposition these birds are cunning, cautious, and very watchful. When taken young, they are easily domesticated, and in that state soon become impudent and obtrusive. Are greatly addicted to pilfering, and their attention seems particularly attracted by glittering objects. Are very imitative, and may be taught to articulate words. Are not nice in the selection of their diet, feeding indiscriminately upon insects, carrion, grain, eggs, &c. Many species live and travel in bands or societies. Scarcely any difference in plumage is observable between the male and female; and they are subject to only one moult in the course of the year.

RAVEN.

CORVUS CORAX, Linn.

PLATE XXVII.

Corvus Corax, Linn. Syst. 1. p. 155. 2.—*Fauna Suec.* No. 85.—*Gmel.* Syst. p. 364. sp. 2.—*Lath.* Ind. Ornith. 1. 150. 1.
Corvus, Briss. 11. p. 8. 1.—*Raii* Syn. p. 39. A. 1.
Le Corbeau, Buff. Ois. v. 3. p. 13. t. 2.—*Id.* Pl. Enl. 495.
Corbeau noir, Temm. Man. d'Ornith. v. 1. p. 107.
Kolkrabe, Bechst. Naturg. Deut. v. 2. p. 148.—*Meyer*, Tasschenb. Deut. v. 1. p. 93.
Raven, Br. Zool. 1. p. 218. 74.—*Arct. Zool.* 2. No. 134.—*Lewin's Br. Birds*, 1. t. 33.—*Lath.* Syn. 1. p. 367. 1.—*Id. Supp.* p. 74.—*Mont. Ornith. Dict.*—*Id. Supp.*—*Bewick's Br. Birds*.—*Pult. Cat. Dorset.* p. 4.—*White, Hist. Selb.*

PROVINCIAL—Corby.

THE Raven is the largest and strongest bird of this genus, and is found in every quarter of the globe, and under all climates, braving the snows of Greenland with as much ease as it bears the sultry glances of the Torrid Zone.—Its favourite places of habitation are in extensive woods, or in a rocky and mountainous country.

It is sometimes seen in the neighbourhood of large towns, drawn thither by the allurement of carrion, and other offal.

But its appetite is not confined merely within these useful limits, for it often commits great destruction amongst lambs and sickly sheep, which it leaves to a miserable and lingering death, after having picked out the eyes. Young ducks, chickens, and goslings, also frequently fall a sacrifice to its voracity. For the above reasons, perpetual war is made upon the breed by the shepherds and husbandmen, and it is perhaps in some countries only saved from extermination by the secluded or inaccessible nature of the places in which it builds its nest. The Raven is said to possess the sense of smell in an exquisite degree of perfection, and to scent its food at a surprising distance *. Even at Hudson's Bay, where the severity of the frost very rapidly destroys the effluvia of dead matter, these birds assemble in troops, from all quarters, very soon after the slaughter of an animal, although at the time it takes place not one of them is to be seen on the wing. In a state of freedom, the Raven is very wary, and can rarely be taken by surprise. When young it is easily domesticated, and may be taught a variety of tricks, as well as to articulate a few words. It is, however, always bold and mischievous, and displays its natural cunning in constantly pilfering. Any bright objects, as silver, glass, &c. are particularly alluring ; and these it secretes in some hole or crevice, thus establishing a regular depository for its thefts. Some curious anecdotes relative to this subject may be found in the works of authors on natural history †.

It builds upon the loftiest trees, or on steep and inaccessible rocks. The nest is composed of sticks, lined with wool, hair, &c. The eggs are of an oil-green colour, blotched with darker stains ; are generally five or six in number, and

* There are now great doubts about the perfection of this sense, both with regard to the Vultures and Crows. From experiments made it should appear, that the detection of their prey, &c. is attributable rather to their acuteness of *sight* than of *smell*.

† See MONT. Ornith. Dict. article *Raven* ; WHITE's Nat. Hist. of Selborne, &c. ; and " Northern Zoology," article *Raven*.

scarcely exceed in size those of the Carrion Crow. It breeds very early in the year, commencing nidification about the middle of February. During incubation, the female is regularly attended and fed by the male bird, who also occasionally occupies her place. At this season they are very bold, and will not permit any Hawk or other bird to approach their haunt with impunity. They pair for life, and return every year to the same spot to breed. When the young become fully fledged, and are able to provide for themselves, the parent birds drive them away from the neighbourhood. In fine weather, Ravens fly at a considerable height, and perform various rapid manœuvres ; and, whilst thus engaged, they utter a peculiar and quickly repeated note, unlike their usual hoarse and disagreeable croak. The Raven is a very long lived bird ; but the period of its years has never been accurately ascertained, and is probably a little exaggerated in fable.

PLATE 67 *. A male, in the proportion of four-fifths of the natural size.

General description.

Bill very strong, nearly three inches in length, black. Nostrils covered with bristly feathers, reaching to half the length of the bill. Irides with two circles, the outer one brown, the inner grey. The whole of the plumage black, the upper part glossed with blue. Throat-feathers narrow, raised and acuminated ; those of the hinder part of the neck being long, loose, and silky. Tail more than half the length of the body, considerably rounded at the end, and the feathers bent slightly upwards. Legs and toes plated, black. Claws black, strong, and much curved.

CARRION CROW.

CORVUS CORONE, Linn.

PLATE XXVIII.

Corvus corone, Linn. Syst. 1. p. 155. 3.—*Gmel.* Syst. 1. p. 365. sp. 3.—
Lath. Ind. Ornith. 1. 151. sp. 4.
Cornix, Raii Syn. p. 39. A. 2.—*Will.* p. 83.
La Corneille noir ou Corbine, Buff. Ois. v. 3. p. 45. t. 5.—*Id.* Pl. Enl. 483.
Corneille noir, Temm. Man. d'Ornith. v. 1. p. 108.
Krahen Rabe, Bechst. Naturg. Deut. v. 2. p. 117.—*Meyer,* Tasschenb. Deut. v. 1. p. 94.
Carriion Crow, Br. Zool. 1. No. 75. t. 34.—*Arct. Zool.* 2. No. 135.—*Lewin's Br. Birds,* 1 t. 34.—*White's Hist. Selb.* p. 97.—*Will. (Ang.)* p. 122 t. 18.—*Lath. Syn.* 1. p. 370. 3.—*Pult. Cat. Dorset.* p. 4.—*Mont. Ornith. Dict.*—*Id. Supp.*—*Bewick's Br. Birds,* v. 1.—*Low's Fau. Orcad.*—*Shaw's Zool.* v. 7. p. 345.

PROVINCIAL—Black-Neb, Corby-Crow, Flesh-Crow, Gor-Crow,
 Midden-Crow.

THIS species bears a strong resemblance in form and habits to the Raven, but is much inferior in size. It may be readily distinguished from the Rook, by the greater strength and curvature of its bill, and which is never deprived of the bristly feathers that cover the base and nostrils, as is the case with the latter; its note also is hoarser, and the glossy tints of its plumage are more inclined to greenish-blue, than to the violet and purple of the Rook. Carrion Crows seldom associate in numbers, but generally remain in pairs through the year. They are omnivorous, feeding indiscriminately upon carrion, young birds or animals, eggs, roots, grain, &c., and, when pressed by hunger, will sometimes attack birds upon the wing. MONTAGU mentions, observing one in pursuit of a pigeon, at which it pounced like a hawk, and another that struck a pigeon dead from the roof of a barn. In the breeding-season, they are mortal enemies to the young of all poultry.

They chiefly frequent wooded districts, but are common

Nest, &c. throughout the kingdom. They build on trees, forming a nest of sticks, first plastered with clay, and then lined with wool, hair, and other soft materials. The eggs, four or five in number, are similar to those of the Raven. They breed early in the year, usually commencing their preparations in the beginning of February.

This species is common in the western parts of Europe, but of rare occurrence in the eastern. According to TEMMINCK, it is seldom seen in Austria or Hungary.—He also observes, that in those countries where it is rare, as in Sweden, &c. a mixed breed is sometimes produced between it and the Hooded Crow (*Corvus cornix*).

PLATE 28. Figure of the natural size.

General description.

Bill strong, black, and the base always covered with reflected bristly feathers. Plumage entirely black, the upper parts glossed with blue and greenish reflections. Feathers of the throat narrow, small, and closely pressed together, the barbs not adhering at the margins. Tail about half the length of the body, and rounded at the extremity. Legs and toes black, the scales being in lamina or plates. Claws black, hooked, and strong.

HOODED CROW.

CORVUS CORNIX, Linn.

PLATE XXIX.

Corvus cornix, Linn. Syst. 1. p. 156. 5.—*Fau. Suec.* No. 88.—*Gmel. Syst. 1.* p. 336. 5.—*Lath. Ind. Ornith.* 1. 153. 7.

Cornix cinerea, Briss. p. 2. 19. 4.—*Raii Syn.* p. 39. A. 4.—*Will.* p. 84. t. 18. and 77.

La Corneille mantelée, Buff. Ois. v. 3. p. 61. t. 4.—*Id. Pl. Enl.* 76.—*Corneille Mantelée, Temm. Man. d'Ornith.* v. 1. p. 199.—*Meyer, Tasschenb.* Deut. v. 1. p. 95.—*Frisch, Vögel.* t. 65.

Royston Crow, Will. Ang. 124. t. 18.—*Albin.* 2. t. 23.—*Low's Fau. Orcad.* p. 47.

Hooded Crow, Br. Zool. 1. No. 77.—*Arct. Zool.* 2. p. 251. D.—*Lewin's Br. Birds,* 1. t. 36.—*Lath. Syn.* 1. p. 374. 5.—*Id. Supp.* p. 77.—*Montagu's Ornith. Dict.*—*Bewick's Br. Birds,* 1. 69.—*Don. Br. Birds,* v. t. 117.—*Pult. Cat. Dorset.* p. 5.—*Shaw's Zool.* 7. p. 348.

PROVINCIAL—Dun Crow, Grey-backed Crow, Bunting Crow.

THE birds of this species are indigenous in the western and northern parts of Scotland, but are migratory in England, where they arrive in October, and depart upon the approach of spring. I am assured, from the most authentic information, that in those districts of Scotland where they abound, there is no visible diminution of their number during the winter months: the inference then seems to be, that the greater part of those which visit England come from Sweden, Norway, and other countries situated in the north-east. And this opinion is strengthened by the fact of their generally arriving with the first flight of Woodcocks, which birds always take advantage of a north-eastern breeze for their journey. In Scotland they build in trees, rocks, or sea-cliffs, as may accord with the situation; the nest being formed of sticks, and lined with soft materials. They lay four or five eggs, similar to those of Carrion-Crow. In the breeding-season they are very destructive to the eggs and young of the red grouse; and, like the Raven, will frequently attack lambs and sheep, when in a weakly condition. Nest, &c.

Food.

In the northern counties of England they resort most to the sea-shore, where they feed upon shell-fish*, and substances thrown up by the tides; and will sometimes scoop out the stalk of the sea-tangle (*Fucus saccharinus*), when detached from the rocks by the violence of the waves. They frequent the extensive downs in the southern counties, where they feed in company with others of the genus, upon grain, worms, and carrion. Their note is harsh, rather shriller than that of the Carrion-Crow, and easily distinguished from it. According to TEMMINCK, they are found throughout the mountainous districts of the east of Europe, and are common in the Alps, where they breed.

PLATE 29. Figure of the natural size.

General description.

Bill strong, and in shape very similar to that of the Raven, and not to that of the Rook, as PENNANT asserts, colour black. Head, throat, wings, and tail black, with blue and greenish reflections. Neck and the rest of the body smoke-grey, the shafts of the feathers being dark. Tail rounded at the end. Irides brown. Legs and toes plated, black.

Sometimes this bird varies in colour, and is found entirely white, or black.

* I have repeatedly observed one of these birds to soar up to a considerable height in the air, with a cockle or mussel in its bill, and then drop it upon the rock, in order to obtain the included fish. Dr FLEMING, in his "Philosophy of Zoology," considers instinct, in this degree, as bordering closely upon intelligence, as implying a notion of power, and also of cause and effect.

ROOK.

CORVUS FRUGILEGUS, Linn.

PLATE XXXII.

- Corvus frugilegus, Linn.* Syst. 1. 156. 4.—*Gmel.* Syst. 1. p. 366. sp. 4.—
Lath. Ind. Ornith. v. 1. p. 152. sp. 5.
Cornix nigra frugilega, Raii Syn. p. 83. A. 3.—*Will.* p. 84. t. 18.
Cornix frugilega, Briss. 2. p. 16. 3.
Le Freou ou Frayonne, *Buff. Ois.* v. 3. p. 55.—*Id. Pl. Enl.* 484.
Freux, *Temm.* Man. d'Ornith. v. 1. p. 110.
Saat-Rabe, *Bechst.* Naturg. Deut. v. 2. p. 1199.—*Meyer,* Tasschenb. Deut.
v. 1. p. 97.—*Frisch.* Vög. t. 64.
Rook, Br. Zool. v. 2. 221. 76.—Arct. Zool. 2. p. 250. A.—*Will.* (Ang.)
p. 123.—*Lewin's Br. Birds,* 1. t. 35.—*Lath. Syn.* 1. p. 372. 4.—*Id. Supp.*
p. 76.—*Mont. Ornith. Dict.*—*Bewick's Br. Birds,* 1. p. 71.—*Pult. Cat.*
Dorset. p. 4.—*Shaw's Zool.* v. 7. p. 347.

THE rook is in general rather larger than the Carrion-Crow, from which it greatly differs in habits. Its bill is also longer, the upper mandible weaker, and not so much arched, and the glossy tint of its plumage more inclined to purple.

In the adult state it is easily distinguished by the naked and scurfy white skin at the base of its bill and on the chin, produced by the abrasion of its bristly feathers, which, in the young bird, cover this part and the nostrils *: These feathers are generally worn off by constant thrusting of its bill into the soil in search of worms and the larvæ of the different insects, that form its principal food. It also eats grain *Food.* and other seeds. The Rook has erroneously been viewed in the light of an enemy by most husbandmen, and in several districts attempts have been made either to banish it, or to extirpate the breed. But wherever this measure has been

* MR BEWICK holds this to be an original peculiarity, and not produced by the above mentioned cause; and says, that the same appearance has been observed in those brought up in a domesticated state, and not undergoing the usual method of subsistence. I have kept Rooks till they have been more than a year old, without noticing any approach to this peculiarity; and, in a wild state, it is usually apparent before that period.

carried into effect, the most serious injury to the corn and other crops has invariably followed, from the unchecked devastations of the grub and caterpillar. As experience is the sure test of utility, a change of conduct has in consequence been partially adopted ; and some farmers now find the encouragement of the breed of Rooks to be greatly to their interest, in freeing their lands from the grub of the cockchafer (*Melolontha vulgaris*), an insect very abundant in many of the southern counties. In Northumberland I have witnessed its usefulness in feeding on the larvae of the insect commonly known by the name of *Harry Longlegs* (*Tipula oleracea*), which is particularly destructive to the roots of grain and young clovers. Rooks are strictly gregarious, not only breeding, but living and seeking their food together, during the whole year, in numerous societies. They breed on the same trees, and generally occupy the same nest through successive years, and none but natives are permitted to become members of each society *.

They frequent cultivated districts, and the loftiest trees in the immediate vicinity of old country residences, are generally chosen for their habitations. There are even many instances of colonies being established in the middle of populous cities and towns, where they have been allowed to breed unmolested.

Early in the spring, as the season of pairing, and the period of incubation approach, the rookery exhibits an amusing scene of provident industry, which is described in WHITE's Natural History of Selborne, with the author's characteristic and strong touches.

During incubation the female bird is assiduously attended and fed by the male, whose kind offices she receives with flut-

* A remarkable instance of their aversion to strangers is given by BEWICK in his history of the Rook ; and a curious account of the contentions between two colonies of Rooks and Herons, is narrated in HUTCHINSON's History of Cumberland.

tering wings, open beak, and the same interrupted note, that must have been generally observed in the young birds.

The eggs of the Rook are four or five in number, of a bluish-green colour, blotched with darker stains. After the young have taken wing, the old birds sometimes forsake the nest-trees, but invariably return to them again in October, at which time they are observed occasionally to repair their nests.

The Rook is common throughout England, and the greater part of Scotland. It is a native of most of the temperate European regions, and of some parts of Asia. According to LATHAM, it is migratory in France and Silesia, and he adds, that it is a singular circumstance the Islands of Jersey and Guernsey should be without Rooks, particularly when it is ascertained that they frequently fly across the channel, from this country to France.

PLATE 30. Figure of the natural size.

Bill bluish-black, the base, in the adult bird, denuded of feathers, and covered with a white scurf. Whole plumage black, glossed with rich tints of blue and violet-purple. Feathers on the back of the neck long, loose, and silky. Legs and claws black.

General description.

This bird is subjected to considerable variation of plumage, being sometimes found of a pure white, or of a piebald appearance. I possessed two of a sienna-yellow colour, with the wings and tail inclining to yellowish-grey, with red irides, and with the bill, legs, and toes, flesh-red, taken from the same nest, in which were also two of the usual colour.

JACKDAW.

CORVUS MONEDULA, Linn.

PLATE XXXI. FIG. 1.

Corvus monedula, *Linn.* Syst. 1. p. 156. 6.—*Fau. Suec.* No. 89.—*Gmel.* Syst. 1. p. 376. sp. 6.—*Lath. Ind. Ornith.* v. 1. p. 154. sp. 11.—*Briss.* 2. p. 24. 6.—*Raii Syn.* p. 40. t. 5.—*Will.* p. 85. t. 19.
Le Choucas, *Buff. Ois.* v. 3. p. 69.—*Id. Pl. Enl.* 523.
Choucas, *Temm. Man d'Ornith.* v. 1. p. 111.
Die Dohle oder Turm-Rabe, *Bechst. Naturg. Deut.* v. 2. p. 1213.—*Frisch, Vög.* t. 67. and 68.—*Meyer, Tasschenb. Deut.* v. 1. p. 99.
Jackdaw, *Br. Zool.* 1. No. 81. t. 34.—*Arct. Zool.* 2. p. 251.—*White's Hist. Selb.* p. 59. and 60.—*Lath. Syn.* 1. p. 378. 9.—*Id. Supp.* p. 78.—*Lewin's Br. Birds*, 1. t. 37.—*Will. (Ang.)* p. 125. t. 19.—*Mont. Ornith. Dict.*—*Pult. Cat. Dorset.* p. 5.—*Bewick's Br. Birds*, 1. 73.—*Low's Fau. Orcad.* p. 48. sp. 3.—*Shaw's Zool.* 7. p. 350.

PROVINCIAL—Daw, Jack.

THIS well-known species is an inhabitant of all the cultivated districts of England and Scotland. The belfries of churches, old towers, and large deserted buildings, are its favourite abodes. These are its usual breeding places, but where such situations do not occur, it has recourse to the holes of decayed tress, or to the ledges of rocks, and has been known even to build in a rabbit burrow*.—The nest is composed of sticks, and lined with wool and other soft materials. The eggs, which vary from four to seven, are of a pale greenish-blue, spotted with blackish-brown, rather confluent at the larger end.—The Jackdaw is an omnivorous bird, feeding upon worms, insects, grain, fruit, eggs of various birds, and carrion. It is gregarious, often associating in considerable numbers with Rooks during the autumn and winter. It can be easily domesticated, soon becomes remarkably familiar, and may be taught to articulate various words distinctly. It is, however, at the same time very mischievous, and, like the raven, has its peculiar hiding-places, where it not only de-

* See PENNANT'S *British Zoology*.

positis part of its provision, but whatever it can purloin in the course of its domestic rounds.

It is generally found throughout Europe, and, according to TEMMINCK, is very abundant in Holland.

PLATE 31. Fig. 1. Natural size.

Bill black. Irides greyish-white. Top of the head black, with violet reflections, the feathers distinct and rounded. Back part of the head and nape of the neck dark smoke-grey, the feathers open and silky in texture. Upper parts greyish-black. Wing coverts and secondary quills black, glossed with blue and violet. Under parts bluish-black. Legs, toes, and claws, black.

General description.

White varieties are sometimes met with, and in these the Varieties. irides are red. Others entirely black, or black and white, are mentioned by different authors.

GENUS PICA, BRISS. PIE.

GENERIC CHARACTERS.

BILL strong, compressed, with the upper mandible arched, the tip slightly emarginate, and bent over that of the lower one. Commissure gently arched. Nostrils basal, lateral, round, hidden from view by incumbent setaceous feathers. Thighs short, rounded; the first quill-feather narrow, and little more than half the length of the second; the fourth and fifth of nearly equal length, and the longest in the wing. Tail long, and graduated.

Legs of mean length, with the tarsi and toes plated. Outer toe joined at its base to the middle one. Claws strong, and curved; that of the hind toe the largest.

The Pies, although nearly allied to the Crows, differ sufficiently from them in form and habits, to warrant the generic separation first made by BRISSON, and since adopted by most

ornithologists of the present day. Besides our well-known bird, the Common Magpie, this genus contains several exotic species, as *Pica albicollis*, *Pica Erythorynchos*, *Pica vagabunda*, &c. ; of all which the Magpie perhaps approaches nearest to the true Crows, the bill being longer and less curved than in the other species, and the texture of the plumage not so silky, or decomposed. Its members are also nearly connected with the Jays (genus *Garrulus*), by the intervention of certain species of the latter, in which the tail, instead of being square, becomes slightly rounded, or cuneated. Their flight, from the roundness of their wings, differs from that of the Crows, and is supported by short and quick strokes. They are omnivorous, and birds of a bold character; and (like most of the *Corvidæ*), when tamed, are much addicted to carrying off any glittering objects. They have rough and disagreeable voices, but may be taught to whistle, and even to articulate words with tolerable distinctness.

M A G P I E

PICA MELANOLEUCA, Vieill.

PLATE XXXI. FIG. 2.

Corvus Pica, Linn. Syst. 1. p. 157. 13.—Fau. Suec. No. 92.—Gmel. Syst. 1. p. 373.—Lath. Ind. Ornith. v. 1. 162. sp. 32.—Raai Syn. p. 41. A. 1.—Will. p. 87. t. 19.—Briss. 2. p. 35. 1.—Wils. Amer. Orn. v. 4. p. 75. Pl. 35. f. 2.

La Pie, Buff. Ois. v. 3. p. 85.—Id. Pl. Enl. 488.

Pie, Temm. Man. d'Ornith. v. 1. p. 113.

Garten-Grabe, Bechst. Naturg. Deut. v. 2. p. 1267.—Frisch, Vög. t. 14.

Magpie, Br. Zool. 1. No. 78.—Arct. Zool. 2. No. 66.—Lewin's Br. Birds, t. 39.—Will. (Ang.) p. 127. t. 19.—Lath. Syn. 1. p. 392. 29.—Id. Supp. p. 80.—Mont. Ornith. Dict.—Bewick's Br. Birds.—Pult. Cat. Dorset. p. 5.—Don, Br. Birds, 4. t. 95.—Shaw's Zool. 7. p. 369.—North. Zool. 2. 292. No. 95.

PROVINCIAL—Pianet, Madge.

THIS common but handsome species is generally dispersed through the united kingdom, except in very mountainous districts. It is a bird of a crafty and restless disposition,

and, although shy, and singularly wary, is frequently seen near the habitation of man.—In diet, it is omnivorous. No Food. animal food, observes MONTAGU, comes amiss to its voracious appetite. It preys indiscriminately upon young poultry, eggs, and tender lambs, as well as the most offensive carrion. Is very destructive to the young of all kinds of game, and does not refuse grain, insects, and worms.

These birds are usually observed in pairs, and continue together through the whole year. At times, however, they appear to hold social meetings, during which⁷ they are very clamorous, and maintain a continued chattering. In winter, they often assemble in numbers to roost in particular districts, but separate again through the day. When an old bird of this species has been shot, or caught in a trap, during the breeding season, I have frequently been surprised at the short period that intervened before the survivor was provided with another mate, in some instances scarcely exceeding the space of a day.

In the fabrication of its nest, the Magpie displays wonderful ingenuity, rendering it not only a sheltered and warm residence for its young, but even a secure fortress against external enemies. The outer part is composed of sticks, lined with a thick plastering of clay, on which is disposed a soft bed of the small fibres of roots and dry grass. Over the body of the nest is erected a covering or dome, composed of the sharpest thorny twigs (those of the black or sloe thorn being generally preferred), closely interwoven, so as to preclude all entrance except at one or two small lateral holes, barely large enough for the admission and egress of the owners. The number of the eggs is from six to eight, of a yellowish-grey colour, speckled with yellowish-brown. The place selected for nidification varies, depending on the facilities afforded, but always with a view to security. Where trees abound, that which is loftiest, or difficult of access, is chosen, and, in failure of these, the most impenetrable hedge or thorn bush. If taken young, it soon becomes tame, and,

like others of this genus, may be taught tricks, and the articulation of some words. When alarmed, the Magpie gives warning to all other birds and animals of the approaching danger by its chattering note, the import of which appears to be understood, and universally attended to. In the northern parts of England, the lingering remains of popular superstition still attach to the appearance of this bird, and various are the events predicted from the numbers seen together, their mode of flight, &c. The species is found in most of the temperate and northern regions of the Old Continent; and in Asia, it is met with inhabiting the plains, in Siberia, and as far as Kamtschatka. According to TEMMINCK and DR RICHARDSON, this bird exhibits also no specific difference in many parts of North America.

PLATE 31. Fig. 2. Natural size.

General description.

Bill black, with a small notch at the tip. Irides dark brown. Head, neck, back and breast black. The feathers on the throat very open in the texture, having but few barbs, and terminating with a bristle. Scapulars and belly white. Adjoining the tail-coverts is a bar of greyish-white, loose silky feathers. Rump and vent black. Wings glossed with blue and green reflections. The central parts of the inner webs of the quill-feathers white. First quill-feather very short, the fourth and fifth being the longest. Tail about ten inches in length, bluish-black, glossed with golden-green, blue, and purple, producing in different lights the richest iridescent reflections; is very wedge-shaped, the feathers rapidly decreasing in length to the outermost, which are scarcely half the length of the two central feathers, which are even. Legs and claws black. The female resembles the male bird, but is generally inferior in size.

GENUS GARRULUS, *BRISS.* JAY.

GENERIC CHARACTERS.

BILL shorter than the head, conical, slightly compressed, strait at the base, rather deflected towards the tip, which is faintly emarginated. The lower mandible of nearly equal thickness, and having its culmen equally convex with that of the upper. Commissure strait. Head crested. Nostrils basal, lateral, hidden from view by short setaceous plumes.

Wings rounded, with the first quill-feather short; the fourth, fifth, and sixth of nearly equal length, and the longest in the wing. Tail of mean length; square, or slightly rounded. General plumage loose and soft.

Legs weaker than in genus *Corvus*. Tarsi longer than the middle toe. The outer toe joined at its base to the middle one, and longer than the inner. Hind toe strong, with a dilated sole. Claws stout, moderately curved, and sharp; that upon the hind toe stronger and longer than any of the rest.

The Jays form a well-distinguished group among the Corvidæ, and, with other nearly allied forms, are considered by Mr SWAINSON as composing one of the five minor divisions of the family under the title of *Garrulina*. In their habits, they are more arboreal, or addicted to perching, than the preceding genera; and inhabit woods and forests. Their food is not of so general a character, being more restricted to insects, larvæ, fruits, and pulse, though they occasionally suck the eggs, and devour the young, of smaller birds. They are of a restless and noisy disposition, and their notes are usually harsh and unpleasant. The Jays belonging to the Old World form a marked group, and bear a strong resemblance to each other. Those of the New Continent are distinguished by the rich blues of their plumage, which

prevails to a greater or less degree throughout most of the species. It is probable that a strict examination may shew the propriety of further division in this genus.

JAY.

GARRULUS GLANDARIUS.

PLATE XXXVI.

Corvus glandarius, *Linn.* *Syst.* 1. p. 256. 7.—*Gmel.* *Syst.* 1. p. 378.—*Lath.* *Ind. Orn.* 1. p. 157. 18.—*Raii* *Syn.* p. 41. A. 2.—*Will.* p. 88. t. 29.
Garrulus, *Briss.* 2. p. 49. 1.
Le Geai, *Buff. Ois.* v. 3. p. 107. t. 8.—*Id. Pl. Enl.* 481.—*Geai*, *Temm. Man.* *d'Ornith.* v. 1. p. 114.—*Le Vaill. Ois. de Parad.*, et *Geais. Pl.* 40. and 41.
Pica glandaria, *Klein.* *Av.* p. 61. 21.
Eichel Krahe, *Bechst. Naturg. Deut.* v. 2. p. 1243.—*Frisch*, *Vög.* t. 55.
Jay, *Br. Zool.* 1. No. 79.—*Arctic Zool.* 2. p. 252. E.—*Will. (Ang.)* p. 130. t. 19.—*Lewin's Birds*, t. 38.—*Haye's Br. Birds*.—*Luth. Syn.* 1. p. 384. 19.—*Id. Suppl.* p. 79.—*Mont. Ornith. Dict.*—*Id. Suppl.*—*Pult. Cat. Dorset.* p. 5.—*Walc. Syn.* 1. t. 37.—*Bewick's Br. Birds*, 1.—*Shaw's Zool.* v. 7. p. 356.

PROVINCIAL—Jay-Pie.

THE Jay may certainly be ranked as one of the handsomest Food. of our indigenous birds.—It is very common in many parts of England and Scotland, particularly in districts where trees are abundant, and is well known by its disagreeable cry.—Its food consists of acorns, beech-mast, grain, and various productions of the garden, amongst which cherries and pease are particular favourites. It also devours insects and worms, and will often not only suck the eggs, but destroy the young Nest, &c. of small birds.—Its nest is generally placed in the closest thickets of large woods, and is formed of sticks, lined with the fibres of roots. The eggs are five or six in number, of a pale blue colour, obscurely blotched with yellowish-brown.

The progeny are said by MR PENNANT to follow the parent birds till the succeeding spring, but I have not been able to satisfy myself as to this fact.

Although the usual notes of this bird are harsh and grating to the ear, yet, we are told by MONTAGU, that it is capable

of uttering a pleasant though low sort of song in the spring time, introducing at intervals the bleating of a lamb, mewing of a cat, the note of a hawk, the hooting of an owl, and even the neighing of a horse, and these imitations given with such exactness as to deceive many who have heard them. The Jay is frequently tamed, not only on account of the beauty of its plumage, but for the facility with which it learns to articulate words, and to imitate a variety of sounds. BEWICK mentions one that could perform the noise made by the action of a saw, and another that had been taught to hound a cur dog, on the approach of cattle.

These birds are found in most of the temperate parts of Europe, and in France are even abundant, but seldom congregate largely.*

PLATE 32. Natural size.

Bill black, conical, slightly notched at the tip. Commis- General
sure strait. Irides pearl-grey. Forehead and crown of ^{description.} the head streaked with black, the feathers elongated and narrow, and forming a crest, which it can erect or de- press at pleasure. From the corners of the mouth are black *moustaches*, pointing downwards. Chin white. Hind part of the head, back, and scapulars light brownish-purple-red. Rump, breast, and belly white. Lesser wing-coverts brownish-orange. Greater coverts beauti- fully barred with blue and black; the feathers stiff and compact. Greater quills dusky, the outer webs bluish-grey. The six anterior secondaries black, having the outer web white towards the base, the two next entirely black, the rest brownish-red, tipped with black. Tail black, square at the end, the middle feathers having one or more pale grey bars at the base. Legs flesh-red,

* Several beautiful species of the Jay have lately been brought from the Himalayan range of mountains, agreeing with the European type in form, and, in a great measure, in the disposition also of their colours. Some of these are figured in GOULD's "Century of Himalayan Birds."

tinged with yellowish-brown. The female is similar in plumage to the male.

Accidental varieties are sometimes found of a pure white, with the wing-coverts pale blue. In such instances, the bill, irides, and legs are pale flesh-red.

GENUS FREGILUS, CUV. CHOUGH.

GENERIC CHARACTERS.

Bill longer than the head, strong at the base, arched, slightly compressed, with the end of the upper mandible rather subulated, drawn to a point without any emargination, and extending beyond that of the lower, which follows the curve of the upper one, without showing any distinct angle. Commissure arched. Tomia of both mandibles entire. Nostrils basal, oval, hidden by closely-set incumbent setaceous feathers. Head small, and flat. Wings long, extending to more than two-thirds of the length of the tail. First quill-feather short; the fourth and fifth the longest in each wing. Tail square, or slightly rounded. Nostrils open, basal, lateral and egg-shaped, hidden by the reflected bristles at the base of the bill. Feet strong. Legs and toes plaited. The tarsus longer than the middle toe. Toes four, three before and one behind; the outer toe united at its base to the middle one. Claws strong, much curved; that of the hind toe double the size of the others.

The birds of this genus (which was established by CUVIER for the reception of the *Cornish Chough*, and other exotic species) are easily distinguished from the true Crows by the peculiar form of the bill, which indicates a different economy, and approaches near to that of *Epimachus*, and some of the *Birds of Paradise*, and to which it seems to lead the way. These birds are the inhabitants of lofty precipices on

the sea-coast, and of alpine rocks in the interior of the countries to which they belong. They feed chiefly on insects and larvæ, sought for in holes and crevices, are of a bold and inquisitive disposition, but at the same time very wary of danger, seldom admitting of a near approach.

CORNISH CHOUGH.

FREGILUS GRACULUS, Cuv.

PLATE XXXIII.

- Pyrrhocorax graculus, Temm. Man. d'Ornith. v. 1. p. 122.*
Corvus graculus, Linn. Syst. 1. p. 158. 18.—Gmel. Syst. 1. p. 337.—Lath. Ind. Ornith. v. 1. p. 165. 41.
Corvus docilis, Gmel. Syst. 3. p. 385. t. 39.
Coracias, seu Pyrrhocorax, Raii Syn. p. 40. A. 6.—Will. p. 86. t. 19.—Briss. 2. p. 3. t. 1.
Corvus eremita, Gmel. Syst. 1. p. 377.—Lath. Ind. Ornith. 1. p. 166. 42.
Le Coracias, ou Le Coracias Huppe ou sonneur, Buff. Ois. v. 3. p. 1. and 9. t. 1.—Id. Pl. Enl. 255.
*Stein-Krahe, Bechst. Naturg. Deut. v. 2. p. 1238.—Id. Tasschenb. Deut. p. 91.—Meyer, Tasschenb. Deut. v. 1. p. 101.—Id. Vög. Deut. t. Heft. Hermit Crow, Lath. Syn. 2. p. 403. 41.—Gesner's Wood Crow, p. 396.
Cornish Chough, Albin. 2. t. 24.—Will. (Ang.) p. 126. t. 19.—Haye's Br. Birds, t. 6.
*Red-legged Crow, Br. Zool. 1. No. 80. t. 35.—Lewin's Br. Birds, 1. t. 41.—Lath. Syn. 1. p. 401.—Mont. Ornith. Dict.—Id. Suppl.—Pult. Cat. Dorset. p. 6.—Bewick's Br. Birds, 1. p. 80.—Shaw's Zool. 7. p. 378.**
- PROVINCIAL—Cornish Daw, Cornwall Kae, Killigrew, Chauk-Daw, Market-Jew Crow.

THE Chough is far from being a numerous species in this country, and is confined to particular districts. It is found on the rocky coasts of Cornwall and Devonshire in England, and in Flintshire, Denbighshire, and the Isle of Anglesea in Wales; and abounds in the Isle of Man. In Scotland, it inhabits the precipices of some of the Hebrides, and the western shores of the mainland.* On the Continent, it is numerous in the Swiss Alps, and in the Tyrol, frequenting

* It is also met with in the neighbourhood of Berwick-on-Tweed, upon the high and rocky coast about St Abb's Head, and Coldingham.

the loftier regions, and the confines of the glaciers, where it breeds, associated with the Alpine Chough (a species of the nearly-allied genus *Pyrrhocorax*). With us, it is seldom seen far inland, breeding on the sea-cliffs, or in old castles
 Nest, &c. and church-towers near the shore.—The nest is formed of sticks, lined with a great quantity of wool and hair. The eggs are of a bluish-white colour, speckled at the larger end with yellowish-brown. It is a bird of a lively gait, and of a restless and crafty disposition, and, like many of the Crow genus, its attention is particularly caught by glittering objects.
 Food. Its natural food principally consists of insects, even the smallest of which it is enabled to reach in the crevices of rocks and the joints of walls, by the aid of its slender and sharp-pointed bill. It also eats grain and berries.

It has been remarked, that the Chough will not alight upon the turf, if it can possibly avoid it, always preferring gravel, stones, or walls. It is easily domesticated, when begun with at an early period ; and an interesting account of a tame bird of this species is given by MONTAGU, in the Supplement to his Ornithological Dictionary, to which my readers are referred.

PLATE 33. Natural size.

General description.

Bill long, slender, and considerably arched, of a beautiful orpiment orange-colour. Irides yellowish-brown. Whole plumage black, glossed with purple and blue. Legs and toes the same colour as the bill. Claws black, strong, and hooked.

The female is of a similar plumage to the male, but rather less in size.

The young of this species, according to TEMMINCK, have dark-coloured legs previous to the first moult ; but MONTAGU asserts them to be orange-coloured from the nest.

GENUS NUCIFRAGA, BRISS. NUTCRACKER.

GENERIC CHARACTERS.

BILL conical, longer than the head, and strait; the upper mandible having its culmen rounded, and longer than the lower one; both of them terminating in a slightly obtuse point. The lower mandible of nearly equal thickness with the upper one, and tapering gradually from the base to the point. Commissure straight to the base; from thence backwards slightly angulated. Nostrils in the base of the bill round, open, and covered by the reflected frontal bristles. Wings long, rounded; the first quill short; the fourth and fifth equal to each other, and the longest in the wing. Tarsus longer than the middle toe. Feet with three toes before, and one behind. The outer toe joined to the middle one at its base. Claws not much curved, but very sharp.

This bird has also been very judiciously separated from the Crows by late ornithologists, essentially differing from that genus, not only in the conformation of its bill, but in its habits. In the latter respect it approaches nearer to the Woodpeckers, and seems to form a connecting link between the genera *Corvus* and *Picus**. It is the only known species of this genus†.

* It forms apparently a still closer tie between the present and the preceding families; its bill being very similar in shape to that of *Cassicus*. Mr VIGORS makes this and *Barita* the introductory genera to the family of *Corvidæ*. See VIGORS "on Nat. Aff." p. 447.

† Another species has since been discovered in Central Asia, and figured in GOULD's "Century of Himalayan Birds."

NUTCRACKER.

NUCIFRAGA CARYOCATACTES, Briss.

PLATE XXXIII *.

- Nucifraga Caryocatactes, *Briss.* 2. p. 59. t. 5. f. 6.—*Temm.* *Man. d'Ornith.* 1. p. 117.
Corvus Caryocatactes, Linn. Syst. 1. p. 157. 10.—*Fau. Suec.* No. 91.—*Gmel. Syst.* 1. p. 270.—*Lath. Ind. Ornith.* 1. p. 164. t. 39.—*Raii Syn.* p. 42. 5.—*Will.* p. 90. t. 20.
Caryocatactes Nucifraga, Nils. Orn. Suec. v. 1. p. 90. sp. 42.
Le Casse noix, Buff. Ois. v. 3. p. 122. t. 9.—*Id. Pl. Enl.* 50.
Nussrabe, Meyer, Tasschenb. *Deut.* v. 1. p. 103.
Nutcracker, Br. Zool. Append. t. 1.—*Arct. Zool.* 2. 252. D.—*Will. (Ang.)* p. 132. t. 20.—*Lewin's Br. Birds.* t. 49.—*Lath. Syn.* 1. p. 400. 38.—*Id. Supp.* p. 82.—*Mont. Ornith. Dict.*—*Id. Supp.*—*Bewick's Br. Birds.*—*Walc. Syn.* 1. t. 38.—*Don, Br. Birds.* 4. t. 80.
Nutcracking Crow, Shaw's Zool. v. 7. p. 353.

Rare visitant. THE Nutcracker is a very rare visitant in Great Britain. Not more than three or four instances are upon record of its having been observed in this country. To these I may add another, as this bird was seen in Netherwitton Wood, in the county of Northumberland, in the autumn of 1819, by my coadjutor in the delineations for this work, Captain ROBERT MITFORD of the Royal Navy.

Food. According to the accounts given of this species by ornithologists who have had the opportunity of attending to its habits, it approaches, in many points, very closely to some of the genus *Picus*, particularly to those of foreign locality. Like them, it ascends the trunks of trees with facility, feeding on the various insects and larvæ that inhabit the bark and wood, which its long straight bill aptly enables it to reach, performing a similar office to the long extensile tongue of the Woodpecker. It feeds also upon the seeds of the different kinds of fir *, and upon nuts, which, like the Nut-

* My brother, during an excursion in Switzerland, September 1825, met with a large flock of Nutcrackers, in a forest mostly composed of pinasters and stone pines. These birds were all busily engaged, feeding upon the seeds contained in the cones. They were not wild, but allowed of a near approach.

hatch, it breaks by repeated strokes of the bill.—It selects Nest, &c. for nidification the hole of a decayed tree, and this, by the labour of its bill, it frequently enlarges. It lays five or six eggs, of a yellowish-grey colour, with a few spots of yellowish or wood-brown.—It inhabits woods and forests, in mountainous regions, and is very numerous in many of the northern parts of Europe, living in large flocks. It is abundant in Norway, Sweden, and parts of Germany, and in some districts is a regular bird of passage. It is common also in Russia; and, in Northern Asia, it occurs in Siberia and Kamtschatka.

Foreign locality.

PLATE 33*. The figure is represented of the natural size, from a British specimen in the Edinburgh Museum.

Bill black. Irides brown. The bristly feathers covering the nostrils brown. Crown of the head and nape of the neck blackish-brown. Quills black. Tail black, with a broad white bar at the end. The rest of the plumage of a deep reddish-brown, inclining to umber-brown, variegated upon the back with white guttiform spots. Those upon the under parts are disposed longitudinally upon each feather. Legs and claws black.

General description.

TRIBE IV. SCANSORES, AUCT.

No members of the fourth and fifth families of the Conirostres (*Buceridae* and *Musophagidae*) being known in Britain, or even in the European Continent, we pass over to the *Scansores*, a fourth tribe of the order *Insessores*. This tribe (as its name imports) contains all such birds as are eminent for their grasping and climbing qualities, most of them distinguished by their feet having the toes disposed in pairs; although many genera (exhibiting similar habits, and closely connected by affinity) are necessarily admitted, which have the feet formed upon the general plan, but so modified

as to render them fit instruments for climbing. Such are the members of the family *Certhiadæ*, answering to TEMMINCK's order *Anisodactyli*. The five primary divisions or families that compose the circle of the tribe, are, the *Psittacidæ* and *Picidæ* (being the typical groups), the *Certhiadæ*, *Cuculidæ*, and *Ramphustidæ* (the Aberrant).* We possess examples in Britain of only three of these families, viz. *Picidæ*, *Certhiadæ*, and *Cuculidæ*.

FAMILY II. PICIDÆ, VIG.

THE *Picidæ*, one of the typical families of the *Scansores*, contains, besides the true Woodpeckers, other genera nearly allied to them in habits, and which, from the variation in structure of the bill, support the necessary connection with the other families of the tribe. Such is the genus *Pogonias* (ILLIG.), which, from the deep and curved form of the bill, seems to lead back to the *Psittacidæ*; and nearly allied to it, follows that of *Bucco* (LINN.), where the bill makes a nearer approach to that of the true Woodpeckers. The Wrynecks (genus *Trochocercus*, LINN.) are also properly included in this family, as well as that group of which the genus *Oxyryynchos* (TEMM.) is the type. The farther division of it has been noticed by MR SWAINSON, who points out four of its sub-families, named by him *Piciana*, *Bucconina*, *Troxina*, and *Oxyryynchina*; the type of the fifth is yet unknown. I have, however, from the deficiency of species rendering it impossible to institute the minute examination and analysis necessary, described our three Woodpeckers under the title *Picus*, merely adverting to the genera under which they ought to be arranged, according to their affinities, as given by MR SWAINSON.

* To comprehend the affinities which unite the various groups of this tribe with each other, and their connexion with the contiguous orders and families, I refer my readers to the writings of MR VIGORS and MR SWAINSON.

GENUS PICUS, LINN. WOODPECKER.

GENERIC CHARACTERS.

BILL as long as, or longer than, the head, straight, conical, compressed, culminated, angular, and wedge-shaped at the point. Tongue long and extensile, worm-shaped. Nostrils basal, oval and open, concealed by the reflected, bristly feathers at the base of the bill. Wings with the first quill very short, the second of mean length, the third and fourth the longest. Tail composed of twelve, sometimes ten, elastic, stiff, and sharp-pointed feathers. Feet robust, formed for climbing; two toes before, and two behind; the two anterior ones joined at their base, the posterior ones divided (or with *three* only, two before and one behind); armed with very strong and hooked claws. The birds of this genus inhabit the forests, and live solitary. Are true climbers, and move along the trunks and branches of trees readily, but always in an upward direction. They feed on the various insects and larvæ that find a nidus in the bark and decayed wood, and which they obtain by means of their strong angular bill, and long extensile tongue, armed at the point with sharp-reflected bristles. They build in holes of trees, occasionally of their own formation. The males are distinguished by an occipital band, generally of a red colour, or by *moustaches*. Their moult is simple, and the young differ from the adults only during the interval that elapses from quitting the nest to the first (or autumnal) moult. Their stomach is membranaceous, and they are without the cæcum.

GREEN WOODPECKER.

PICUS VIRIDIS, Linn.

PLATE XXXVIII. FIG. 1.

Picus viridis, Linn. Syst. 1. p. 175. 12.—*Gmel.* Syst. 1. p. 433. sp. 12.—*Lath.* Ind. Ornith. 1. p. 234. sp. 27.—*Raii* Syn. p. 42. A. 2.—*Will.* 93. t. 21.—*Briss.* 4. p. 9. 1.
Le Pic vert, Buff. Ois. v. 7. p. 23. t. 1.—*Id.* Pl. Enl. 371. and 379.—*Temm.* Man. d'Ornith. v. 1. p. 391.
Grunspacht, Bechst. Naturg. Deut. v. 2. p. 1007.—*Meyer,* Tasschenb. Deut. v. 2. p. 118.—*Frisch,* t. 35.
Green Woodpecker, Br. Zool. 1. No. 84.—*Arct. Zool.* 2. p. 277. B.—*Lewin's Br. Birds,* 2. t. 51.—*Will.* (Angl.) p. 135. t. 21.—*Haye's Br. Birds,* t. 18.—*Lath.* Syn. 2. p. 577. 25.—*Id.* Supp. p. 110.—*Mont. Ornith. Dict.*—*Pult. Cat.* Dorset. p. 6.—*Don,* Br. Birds, 2. t. 37.—*Bewick's Br. Birds,* 1. p. 116.—*Shaw's Zool.* v. 9. p. 183.
 PROVINCIAL—Woodspite, Rain Bird, High-Hoe, Hew-Hole, Awl Bird, Yappingall, Yaffer, Popinjay.

THIS species, the type of that group of Woodpeckers distinguished by their olive or green plumage, and forming Mr SWAINSON's genus *Chrysotilus*, is a common inhabitant of all the wooded parts of England and Scotland, and is well known by its loud and peculiar cry, which, frequently repeated, is supposed to prognosticate rain, and from which it has obtained the provincial name of the *Rain Bird*.* The Green Woodpecker feeds chiefly upon the insects that live in the bark, or that form their receptacles by boring the de-

Food.

* I may take this opportunity of observing, that the habits of animals and birds are perhaps, when thoroughly understood, the best barometers we possess. There is no doubt that their bodily temperament, from not being acted upon by mental affections, and being preserved by regularity of diet in a more uniform state, is far more equably susceptible of the approach of changes of weather than our own. That domestic animals exhibit sometimes irritability, and sometimes heaviness, previous to such changes, is very evident. Our observations on the feathered tribe are of course more limited; but such influence has been remarked in the habits of domestic pigeons, and in rooks, and I have before noticed a similar effect in my account of the Golden Eagle.

cayed wood of trees; which last it is well enabled to reach by the aid of its strong and wedge-shaped bill, penetrating without difficulty to the nidus of the larva. Its long vermiform and extensile tongue is also of service in extracting the smaller insects from the crevices of the bark, where they so often lie concealed. This singular instrument, in addition to a glutinous substance constantly exuding from its surface, is armed at the point with sharp reflected bristles, acting like the barbs of an arrow in preventing the escape of its prey. The above description shews the tongue to be well adapted for the capture of the ant, an insect of which the Green Woodpecker is particularly fond, and on which account it is oftener seen on the ground than the other species. Under a deficiency of its usual food, it will eat nuts. It scales the trunks and branches of trees with facility and swiftness, either in an upright or a spiral direction; but none of the species that frequent this country are able, as has been asserted, to descend, as well as to ascend, with equal readiness. When they wish to descend, it is effected by moving backward, as I have repeatedly observed. This peculiarity of motion seems to be the consequence of the structure of the bird, in which the preponderance is thrown considerably forward. The legs of this bird are short and strong, and, by the disposition of the toes, and the form of the claws, it is enabled to maintain a firm hold in a perpendicular direction, in which position it is materially assisted by the stiff-deflected tail-feathers. It lays its eggs in trees, perforating a round hole, sometimes of considerable depth; for which purpose it selects those in a decaying state, or of the softer kinds of wood, such as the aspen (*Populus tremula*), to which it is very partial. When thus engaged, the strokes are repeated with such velocity, that the head is scarcely perceived to move, and the sound, it is said, may be heard distinctly at the distance of half a mile.*—It makes no

* It also makes a jarring noise in the spring, which may be heard at some distance, and which appears to be a note-call of both sexes to each other.

Nest &c. nest, but the eggs, four or five in number, and of a bluish-white colour, are deposited on the bare wood, at the bottom of the hole.

PLATE 38. Fig. 1. natural size.

General descrip-
tion.

Base of the bill, nasal bristles, and region surrounding the eyes, black. Crown of the head and *moustaches* arterial blood-red; the base of the feathers bluish-grey. Hind part of the neck, upper part of the back, and wing-coverts siskin-green, inclining to sap-green. Lower part of the back and rump gamboge-yellow. Under parts yellowish-grey, inclining to asparagus-green. Quills barred with dusky black and yellowish-grey. Tail barred with oil-green and blackish-brown. Irides greyish-white. Bill bluish-black, two inches long, and wedge-shaped. Tarsi and toes blackish-grey. Claws much hooked, black.

The red upon the head of the female is not so bright, and the *moustaches* are generally black.

The young birds, when they quit the nest, have the head of a yellowish-grey colour, with a few red feathers interspersed. The green of the upper parts is duller, and varied with grey. The *moustaches* are also imperfect. The lower parts yellowish-grey, with darker transverse bars. The irides are bluish-grey.

GREAT BLACK WOODPECKER.

PICUS MARTIUS, Linn.

PLATE D. FIG. 4.

Picus martius, Linn. Syst. I. 173. 1.—Gmel. Syst. I. 424.—Lath. Ind. Orn. I. 224. 1.

Picus niger, Briss. 4. 21. 6.

Picus maximus, Raii Syn. 42. 1.

Le Pic noir, Buff. Ois. 7. 41. t. 2.—Id. Pl. Enl. 596.—Temm. Man. d'Orn. I. 390.

Great Black Woodpecker, Will. (Angl.) 135.—Albin, 2. t. 27.—Penn. Arct. Zool. 2. 296.—Lath. Syn. 2. 552. 1.—Id. Sup. 104.—Lewin's Br. Birds, 2. t. 46.—Mont. Orn. Dict.—Rennie's Mont. Orn. Dict.

In the former edition of this volume, the Great Black Woodpecker was omitted, as I felt uncertain whether its claim to rank as a British bird was sufficiently established to warrant its being placed upon the list, even as an occasional visitant. It appears, however, that, besides the two or three specimens mentioned by PULTENEY, as killed in Devonshire, instances have occurred in other parts of England; among which may be mentioned a bird shot in Lancashire by Lord STANLEY; and another obtained in the neighbourhood of Battersea Fields, near London. These several instances, therefore, (following the course adopted throughout this work, of describing and adding to our Fauna every bird found in its natural state of wildness), give this Woodpecker a claim to be considered as one of our rare visitants. It belongs to Mr SWAINSON's restricted genus *Picus*, and is one of the typical forms. In dimensions it greatly surpasses any of our native species, nearly equaling in size its congeners of America (*Picus principalis* and *Picus pileatus*). It inhabits the forests of the northern and eastern parts of Europe, and extends its residence as far as Siberia. In the more southern and western provinces it is comparatively of rare occurrence. Its habits are, in most

Food. respects, similar to those of the other species, and it procures its food, consisting of larvæ hatched in the bark and decayed wood of trees, bees, and other insects, by scaling the trunks and branches, which it does with the same ease and rapidity
Nest, &c. as the other species. It breeds in deep holes, which are hewed by the power of its bill, frequently even out of the solid wood, and, like the other *Pici*, lays three or four white eggs.

PLATE D. Fig. 4. represents the male bird, of the natural size. Length nearly eighteen inches.

General description. Bill, with the upper part, bluish-white, and the tip passing into bluish-black. The whole of the plumage deep black; except the crown of the head, which is bright arterial blood-red. Iris yellowish-white. Legs and toes bluish-black; the outer hind toe longer than the corresponding front one. Claws semicircular, strong, and very sharp.

GREAT-SPOTTED WOODPECKER.

PICUS MAJOR, Linn.

PLATE XXXVIII. FIG. 2.

Picus major, Linn. Syst. I. p. 176. 17.—*Gmel.* Syst. I. p. 436. sp. 17.—*Faun. Suec.* No. 100.—*Lath.* Ind. Ornith. I. p. 228. 13.
Picus varius major, Raii Syn. p. 43. A. 4.—*Will.* p. 94. t. 21.—*Briss.* 4. p. 34. 13.
Le Pic varié ou Pic Epeiche, *Buff. Ois.* v. 7. p. 57.—*Id. Pl. Enl.* 196. and 595. male and female.—*Temm. Man. d'Ornith.* v. 1. p. 595.
Dic Bunt-specht, *Bechst. Naturg. Deut.* v. 2. p. 1022.—*Meyer, Tasschenb. Deut.* v. 1. p. 121.—*Id. Vög. Deut.* v. 1. t. male and female.—*Frisch. t. 36.* male.
Greater-spotted Woodpecker, *Br. Zool.* I. No. 85.—*Arct. Zool.* 2. No. 162.—*Will. (Ang.)* p. 137. t. 21.—*Lewin's Br. Birds,* t. 47.—*Lath. Syn.* v. 2. p. 564. 12.—*Id. Supp.* p. 107.—*Mont. Ornith. Dict.*—*Pult. Cat. Dorset.* p. 6.—*Don, Br. Birds,* 2. t. 37.—*Bewick's Br. Birds,* v. 1. t. 118.

THE species now given, and which is one of the members of Mr SWAINSON's genus *Picus*, although not so numerous

as the preceding, is rather generally diffused through the woody districts of our island. I have seen it in Scotland, on the banks of the river Spey, and amid the wild scenery of the Dee. In Northumberland, scarcely a year passes without some of these birds being obtained in the months of October and November. This induces me to suppose that they are migratory in some of the more northern parts of Europe, perhaps in Norway and Sweden. They arrive about the same time as the Woodcock and other equatorial migrants; and generally after stormy weather from the north or northeast. They moult at a late period, as several of those which have come into my hands have been in that state as late as the 10th of November. In habits, this species greatly resembles the Green Woodpecker.—It feeds on the different *Food.* insects that are found in the interstices of the bark of trees, but, according to *TEMMINCK*, does not strictly confine itself to them, as it eats also nuts, and seeds of various kinds. It rarely descends to the ground in search of food, or makes an attack upon ant-hills, like the former species. In the spring, and during the breeding season, it very frequently makes the jarring noise mentioned in the foregoing description; and *MONTAGU* relates that a female bird, which he found some difficulty in driving from her nest, immediately flew to the decayed branch of a neighbouring tree, and began that sound; which was answered by the male from a distant part of the wood, who very soon joined her, and both continued to make these vibrations. The most sonorous branches, or those in a particular stage of decay, are always chosen for the purpose.—The eggs of this bird, to the number of four *Nest, &c.* or five, and of a clear bluish-white, are laid in a deep hole, in the trunk or large branch of some decaying tree, which it excavates for itself; and which excavation has in general two openings, to facilitate the inhabitants' escape in case of sudden danger. The young, on quitting the nest, and prior to the first moult, have the crown of the head red, and the occipital band black, in which state it has, by some writers,

been mistaken for the *Picus Medius*, a distinct species, and not found in England.

PLATE 38. Fig. 2. A male of the natural size.

General description.

Bill bluish-black, about one inch and a quarter long. Irides purplish-red. Forehead greyish-white. Crown of the head black. Occiput arterial blood-red. Cheeks and ear-coverts white. From each corner of the lower mandible a streak of black passes towards the nape of the neck, another band of black proceeds from the middle of this, and passes down the side of the neck; the two opposite ones almost meet upon the upper part of the breast. On each side of the back part of the neck is a white patch. Back and lesser coverts velvet-black. Scapulars, and part of the adjoining wing-coverts, white. Throat, breast and belly white. Quills black, each web being spotted with white. Tail stiff, cuneated, the four middle feathers black, the rest with more or less white, and spotted near the tip with black. Vent and under tail-coverts aurora-red. Tarsi and toes blackish-grey. Claws much hooked, and black.

The female bird is without the red occipital band, and in other respects similar to the male.

LESSER-SPOTTED WOODPECKER.

PICUS MINOR, Linn.

PLATE XXXVIII. FIG. 3.

- Picus minor, Linn.* Syst. 1. p. 176. 19.—*Faun. Suec.* No. 102.—*Gmel. Syst.* 1. p. 493. sp. 19.—*Lath. Ind. Ornith.* v. 1. p. 229. sp. 15.
Picus varius minor, Briss. 4. p. 41. 15.
Picus varius tertius, Raii Syn. p. 43. 6.—*Will.* p. 94. t. 21.
Le Petit Epeiche, Buff. Ois. v. 7. p. 62.—*Id. Pl. Enl.* 598. f. 1. and 2.
Pic Epeichette, Temm. Man. d'Ornith. v. 1. p. 399.
Grass-pecht, *Bechst.* Naturg. Deut. v. 2. p. 1039.—*Meyer,* Tasschenb. Deut. v. 1. p. 124.—*Frisch,* Vög. t. 37. male and female.
Lesser-spotted Woodpecker, *Br. Zool.* 1. No. 87. t. 37.—*Arct. Zool.* 2. p. 278. E.—*Lewin's Br. Birds*, t. 49.—*Lath. Syn.* 2. p. 566. 14.—*Id. Sup.* p. 107.—*Mont. Ornith. Dict.*—*Id. Sup.*—*Walc. Syn.* 1. t. 50.—*Pult. Cat. Dorset.* p. 6.—*Bewick's Br. Birds*, v. 1. p. 120.—*Don,* Br. Birds, 2. t. 36.—*Shaw's Zool.* v. 9. p. 166. t. 34. bad figure of male.

PROVINCIAL—Hickwall, Crank Bird.

THIS small species of Woodpecker (also belonging to SWAINSON's restricted genus *Picus*), is less numerous than the others, and seems to be only partially distributed. I have met with it in Herefordshire, and it is well known in the neighbouring counties of Gloucester and Wilts. In the northern and eastern parts of England it is very rare; and, although said by TEMMINCK to resort particularly to forests of fir-trees, I have not been able to trace it in those districts of Scotland where woods of that description abound.— In habits it resembles its congeners, obtaining its food in Food. the same manner, which consists of the smaller insects. Its note is also similar but not so loud. It breeds either in the natural hole of some tree, or in one of its own excavation, the orifice of which is always correspondent with the small size of the bird, and the passage is often of some depth. The eggs are laid on the rotten wood, without any fabri- Eggs. cated nest; they are of a clear pinkish-white, and amount to five or six.

PLATE 38. Fig. 3. Represents a male bird, in the natural size.

General description.

Forehead greyish-white. Crown of the head aurora-red. Streak over the eye, occiput, and nape of the neck, black. Cheeks and sides of the neck white. From the corners of the lower mandible a black streak proceeds downwards towards the shoulder. Upper part of the back and lesser wing-coverts glossy black. Middle region of the back and scapulars white, barred with black. Quills black, spotted with white. Rump and the four middle tail-feathers black; upon the rest, the black decreases to the outer feather, which is wholly white, except a black spot near the tip. Under parts greyish-white, with a few dusky spots upon the sides of the breast. Legs bluish-grey. Bill grey, darker towards the tip. In the female bird, the crown of the head is white, in other respects similar to the male.

GENUS YUNX, LINN. WRYNECK.

GENERIC CHARACTERS.

BILL short, straight, conical, and depressed; the ridge rounded. Mandibles of equal length, sharp, and not emarginated. Nostrils basal and lateral, naked, and partly closed by a membrane. Tongue long, lumbriticiform, and armed at the point with a horny substance. Feet with two toes before, and two behind; the anterior ones joined at their base. Tail consisting of ten soft and flexible feathers. Wings of mean length, the first feather a little shorter than the second, which is the longest in the wing.

This genus contains at present three species, and forms a connecting link between the Cuckoos and Woodpeckers; having the long flexible tail of the former, and approaching

to the straight bill and long extensile tongue of the latter. They are unable, from the want of the stiff deflected tail, to scale the trunks of trees like the Woodpecker genus, but the form of their feet gives them the power of supporting themselves against the tree, while busied in detaching the insects from the bark with their tongue. They are often seen upon the ground in the neighbourhood of ant-hills, the inhabitants of which form their favourite food.

W R Y N E C K.

YUNX TORQUILLA, Linn.

PLATE XXXVIII. FIG. 4.

Yunx torquilla, Linn. Syst. I. p. 172.—*Lath.* Ind. Ornith. v. I. p. 233.—*Gmel.* Syst. I. p. 423.—*Raii* Syn. p. 44. A. 8.—*Will.* p. 95. t. 22.—*Briss.* 4. p. 4. t. 1. f. 1.
Le Torcol. *Buff.* Ois. v. 7. p. 84. t. 3.—*Id.* Pl. Enl. 698.
Torcol ordinaire, *Temm.* Man. d'Ornith. v. I. p. 403.
Die Wendehals, *Bechst.* Naturg. Deut. v. 2. p. 1048—*Meyer*, Tasschenb.
Deut. v. I. p. 127.—*Id.* Vög. Deut. v. I. t. Heft. 9.
Wryneck, Br. Zool. I. No. 83.—*Arct. Zool.* 2. 267. B.—*Will.* (Ang.) p. 138. t. 22.—*Lewin's Br. Birds*, 2. t. 43.—*Lath.* Syn. 2. p. 248. t. 24.—*Id.* Sup. p. 103.—*Mont.* Ornith. Dict.—*Id.* Supp.—*Walc.* Syn. I. t. 44.—*Pult.* Cat. Dorset. p. 6.—*Don*, Br. Birds, 4. t. 83.—*Bewick's Br. Birds*, v. I. t. 111.—*Shaw's Zool.* v. 9. p. 143.

PROVINCIAL—Long-tongue, Emmet Hunter.

THE Wryneck is a very regular periodical visitant, and usually arrives in England a few days before the appearance of the Cuckoo. In the southern, eastern, and midland counties, it is very equally, but not numerously, diffused in the wooded parts of the country. According to MONTAGU, it is rare on the western side of England. In the northern counties, I have traced it as far as Morpeth in Northumberland, where a few are seen every year. Its arrival is soon made known by its peculiar and oft-repeated note, which rather resembles that of the Kestrel, and other small species of Hawks.—The chief food of the Wryneck consists of ants. Food. Periodical visitant.

and their larvæ; and we accordingly find that, at the period of its arrival, the hibernation of these remarkable insects has yielded to the influence of the vernal sun, and the societies are busily employed near the surface of their little mounds in the various duties, so admirably described by HUBER, and the authors of the "Introduction to Entomology." Its departure is also regulated by the same laws, as it leaves us when these insects, upon the approach of autumn or cold weather, again retire to the recesses of their subterraneous habitations. A very interesting description of this bird is given in the Ornithological Dictionary *, as the author was fortunate enough to take a female alive, which he retained in a cage for some days. It was fed with ants and their eggs, contained in a quantity of mould; and these were extracted with singular velocity and unerring aim by its long extensile tongue, not being transfixed by the horny appendage, but retained by the tenaceous gluten, provided by Nature for that purpose. While feeding, the body remains motionless, the head alone being turned from side to side. The bill is seldom used, except to remove the earth, with the view of reaching the insects; and, where the earth is hollow, the tongue is thrust into the crevices, to rouse the ants.

Nest, &c. The Wryneck breeds in the holes of decayed trees, laying its pure white eggs, to the number of nine or ten, upon the bare rotten wood. When surprised upon the nest, it uses, says MONTAGU, a singular action of defence, stretching itself at full length, and erecting the coronal feathers, it suddenly rises, making at the same time a short hissing noise. It has its name from the particular manner in which it turns its head alternately over the shoulders. In this motion, the black streak on the dorsal mesial line of the neck gives it a curious twisted appearance.

According to TEMMINCK, it is found as far north as Sweden, is common in the southern and midland provinces of

* Vol. ii. article *Wryneck*.

Europe, but very rare in Holland. It occurs also in Asia, and in Africa, where probably it takes up its winter residence.

PLATE 38. Fig. Natural size.

Bill yellowish-brown. Ground colour of the head, back, wing-coverts, and rump, yellowish-grey, beautifully mottled with brown specks, and arrow-shaped black bars. A list or streak of blackish-brown runs down the upper mesial line, commencing at the nape of the neck, and reaching to the lower part of the back. Tail long, rounded, grey, mottled with brown, and with four black bars. Wings barred with brownish-black, and wood-brown. Chin and throat yellowish-white, with transverse black bars. On each side of the breast is a patch of wood-brown. Breast and belly white, with numerous arrow-shaped black spots. Legs and toes wood-brown. Irides chestnut-brown.

General description.

The female differs in no respect from the male bird.

FAMILY III.—CERTHIADÆ, VIG.

THE members of this family, nearly allied to the preceding in their general habits of climbing, are separated from them by the form of the feet, which, instead of having the toes divided into pairs, have them disposed in the usual manner, that is, with three toes before and one behind ; their length and structure, however, (particularly that of the hind toe), is such, as to render them equally efficient instruments for scaling perpendicular surfaces, and even with the additional power of moving in either an upward or downward direction. This family, besides the genus *Certhia* (represented by our native *Creper*), contains various others, among which may be enumerated *Dendrocalaptes* (HERM.), some species of which, in the forms of the bill and tail, approach near to

the true Woodpeckers ; *Climacteris* (TEMM.), *Tichodroma* (ILL.), *Sitta* (LINN.), *Xenops* (HOFFMAN.), &c. Mr SWAINSON also thinks that the Wrens (genus *Troglodytes*) strictly belong to this family, and not to the *Sylviadæ*. In this opinion I concur, and have accordingly transferred our Common Wren to a station in the present group.

GENUS SITTA, LINN. NUTHATCH.

GENERIC CHARACTERS.

BILL straight, cylindrical, slightly compressed, subulated, upper mandible rather longer than the lower one, the tip acuminated. Tongue short, horny, and armed at the point. Nostrils basal, and rounded, partly hidden by reflected bristles. Feet with three toes before, and one behind, the outer toe being joined at its base to the middle one ; hind toe of the same length as, or longer than, the middle toe, with a long and hooked claw. Tail consisting of twelve feathers. Wings rather short ; the first quill very short, the third and fourth being the longest.

The several species of this genus are climbers, and differ from the Woodpeckers, in being able to ascend or to descend the trunks of trees with equal readiness.

They feed upon insects, in every state, and also on nuts and seeds. They breed in the natural cavities of trees, or in the deserted holes made by Woodpeckers.

The sexes are similar in plumage, and they are subject to only one moult in the year. Europe possesses but one species.

NUTHATCH.

SITTA EUROPEA, Linn.

PLATE XXXIX. FIG. 1.

Sitta europaea, Linn. Syst. I. p. 177.—*Fauna Suec.* No. 104.—*Gmel.* Syst. I. p. 440.—*Lath. Ind. Ornith.* v. I. p. 261.—*Raii Syn.* p. 47. A. 4.—*Will.* p. 98. t. 23.

Sitta caesia, Meyer, Tasschenb. Deut. v. I. p. 128.

La Sitelle, ou Torchepot, Buff. Ois. v. 5. p. 460. t. 20.—*Id. Pl. Enl.* 623. f. 1.

Sitelle Torchepot, Temm. Man. d'Ornith. v. I. p. 407.

Kleiber, Bechst. Naturg. Deut. v. 2. p. 1061.—*Frisch, Vög.* t. 39.

Nuthatch, Br. Zool. I. No. 89. t. 38.—*Will. (Ang.)* p. 142.—*Lewin's Br. Birds,* 2. t. 53.—*Albin.* 2. t. 28.—*Lath. Syn.* 2. p. 648.—*Id. Supp.* p. 117.—*Mont. Ornith. Dict.*—*Bewick's Br. Birds,* v. I. p. 121.—*Pult. Cat. Dorset.* p. 5.—*Don, Br Birds,* 4. t. 81.

THIS is the only European, as well as British species. In England it is confined to certain districts; and, according to MONTAGU, is not met with in Cornwall. I have not been able also to trace it farther north than the banks of the Wear and Tyne. It is an indigenous bird, and generally frequents wooded and enclosed situations. It runs without greater difficulty both *upwards* and *downwards* on the trunks and branches of trees, in which respect it differs from the Wood-peckers, whose ability is limited to an ascending direction. In the Nuthatch, the tail is flexible, and is therefore never used as a support in climbing.—It feeds upon the insects and their larvæ, that infest the bark of trees, and also upon nuts, and other hard seeds. Its method of arriving at the kernel of hazel-nuts or filberts is curious: having detached the nut from its husk, and afterwards fixed it firmly in a crevice of the bark of some tree, it places itself above it, with its head downwards, and in this position splits the nut by reiterated strokes of its bill. In the autumn, many of these broken nut-shells may be seen in the open bark of old trees, in places where these birds abound, as they return repeatedly to the same spot for this purpose. It breeds in the holes of trees,

Food.

commonly making use of the deserted habitation of a Wood-pecker ; and MONTAGU tells us, that its first step is that of contracting the orifice by a plaster of clay, so as barely to admit of a passage for itself.—The nest is composed of the dead leaves of the oak and other trees, put together without much regularity ; and it lays from five to seven eggs, of a greyish-white, spotted with reddish-brown colour, and very similar to those of the great Titmouse. During incubation, the female sits very close, and it is almost impossible to drive her from the nest ; she defends it to the last extremity, striking with her bill and wings, and making at the same time a hissing noise. In the spring, this bird produces a loud and shrill whistle ; but the singular noise attributed to it by DR PLOTT, in his History of Oxfordshire, has been ascertained to proceed from the true Woodpeckers. It is found throughout Europe, and is stationary in all climates.

PLATE 39. Fig. 1. Natural size.

General description.

Upper part blackish-grey. Bill with the upper mandible blackish-grey, and the under one white at the base. Irides brown. From the posterior angle of the bill, a black streak proceeds, past the eye, and through the ear-coverts, down the sides of the neck. Chin and sides of the face white. Breast and belly buff-orange. Sides and thighs reddish-brown-orange. Under tail-coverts white, and deeply margined with reddish-brown. Quills blackish-grey. Tail composed of twelve short flexible feathers ; the two middle ones grey ; the four outer ones black, with a white spot or bar ; the tip ash-grey. Legs yellowish-grey. The hind toe long ; claws hooked, and large. The female and the young of the year vary but slightly from the above description.

GENUS CERTHIA, *ILLIGER*. CREEPER.

GENERIC CHARACTERS.

BILL of mean length, curved, triangular, compressed, slender and sharp-pointed. Tongue short. Nostrils basal, pierced horizontally, naked, and partly covered by an arched membrane.

Feet with three toes before and one behind, which last is strong, and longer than the middle toe. The outer toe united at its base to the middle one. Tail wedge-shaped, composed of twelve stiff, sharp-pointed, and deflected feathers. Wings having the first quill short, and the second and third shorter than the fourth, which is the longest of all.

The genus Certhia, as now formed by *ILLIGER*, contains only such species as exhibit the essential generic characters above given : the other numerous species, classed by *LATHAM*, *GMELIN*, and other naturalists in their genus Certhia, being now separated, and arranged under the genera *Cæreba*, *Nectarinia*, *Climacteris*, &c.

Creepers scale trees in the same manner as Woodpeckers, and, like them, are supported behind by their stiff deflected tail. They are insectivorous. The plumage is similar in both sexes. Europe furnishes but one species.

COMMON CREEPER.

CERTHIA FAMILIARIS, Linn.

PLATE XXXIX. FIG. 2.

- Certhia familiaris, Linn.* Syst. 1. p. 184. 1.—*Gmel.* Syst. 1. p. 469. sp. 1.—*Lath.* Ind. Ornith. v. 1. 280.
Certhia, Ruii Syn. p. 47. A. 5.—*Will.* p. 100. t. 23.—*Briss.* p. 603. 1.—*Id.* 8vo. 2. p. 2.
Le Grimpereau, Buff. Ois. v. 5. p. 581. t. 21. f. 1.—*Id.* Pl. Enl. 681. f. 1.—*Temm.* Man. d'Ornith. v. 1. p. 410.
Gemeine Baumläufer, Bechst. Naturg. Deut. v. 2. p. 1085.—*Meyer,* Taschenb. Deut. v. p. 130.—*Frisch.* Vög. t. 39. f. 1. and 2.
Common Creeper, Br. Zool. 1. No. 92. t. 39.—Arct. Zool. 2. No. 174.—*Lewin's Br. Birds,* 2. t. 55.—*Albin.* 3. t. 25.—*Lath.* Syn. 2. p. 701.—*Id.* Supp. p. 126.—*Mont. Ornith. Dict.* 1.—*Bewick's Br. Birds,* v. 1. p. 125.—*Pult. Cat. Dorset.* p. 5.—*Walc.* Syn. 1. 54.—*Shaw's Zool.* v. 8. p. 186.

THIS bird, like the preceding one, is the only European species of its genus. It is indigenous, and very generally dispersed throughout England, being found wherever trees grow abundantly. It is common also in Scotland: I have noticed it in the woods at Blair in Athole, and at Dunkeld. With the exception of the Golden-crested Regulus, it is the smallest of our native birds, and weighs scarcely two drachms. It is an excellent climber, and is constantly in motion, on the trunks and branches of trees, always in a perpendicular or spiral ascent, and, like the Woodpeckers, using its stiff, sharp-pointed, and deflected tail, as an aid for that purpose.—It feeds entirely upon small insects, finding them in the seams and crevices of the bark.—Its nest is made in some hole of a decayed tree, and is formed of grass, and the dry inner bark, with a lining of feathers. The eggs vary in number, from seven to nine, and are white, speckled with reddish-brown. In the summer, the Creeper may be frequently heard, repeating its weak and monotonous note, which differs but slightly from that of the Regulus. According to TEMMINCK, it is common throughout Europe, though in some parts migratory.

Food.

Nest, &c.

PLATE 39. Fig. 2. Natural size.

The upper mandible of the bill dusky, the lower yellowish-white. Head and upper parts pale yellowish-brown, intermixed with black, brown, and greyish-white. Rump pale gallstone-yellow. The first four quills dusky, the rest having a broad reddish-white band in the middle; the tips white. Tail yellowish-grey, tinged with brown; the feathers long, stiff, and acuminated. Above the eyes is a whitish streak. Throat, breast, and belly, white, passing towards the vent into pale ochreous-yellow. Legs and toes yellowish-brown.

General description.

GENUS TROGLODYTES, CUR. WREN.

GENERIC CHARACTERS.

BILL slender, slightly compressed, curved, or rarely strait. Nostrils basal, oval, half-covered by an arched and naked membrane. Wings short, rounded, having the first quill very short; second considerably shorter than the third; fourth and fifth of equal length, and the longest in each wing. Tail short, rather rounded, and carried erect. Legs strong. Tarsus of the same length as the middle toe; toes three before and one behind; the outer toe joined at its base to the middle one; the outer and inner ones of equal length; the hind toe long, and armed with a strong hooked claw.

After an attentive consideration of the character and habits of our Common Wren, as well as those of its American congeners, I agree with Mr SWAINSON in the propriety of removing them from the *Sylviadæ*, amongst which they have hitherto been arranged, and placing them as an aberrant group in the scansorial family of the *Certhiadæ*. The plumage of the different species is plain, and mostly confined to shades of brown. Their form is short and thick. They are birds of retired habits, and are usually seen solitary, or in

pairs. The Common Wren is the only European species, but America produces several others.

COMMON WREN.

TROGLODYTES EUROPÆUS, Cuv.

PLATE XLVII. FIG. 5.

Troglodytes europaeus, Cuv. Reg. Anim.

Sylvia Troglodytes, Lath. Ind. Ornith. v. 2. p. 547. sp. 148.

Motacilla Troglodytes, Linn. Syst. 1. p. 337. 46.—Gmel. Syst. 1. p. 993. sp. 46.—Raai Syn. p. 30. A. 11.—Will. p. 164. t. 42.

Regulus, Briss. 3. p. 425. 24.

Le Troglodyte, Buff. Ois. v. 5. p. 352. t. 16. f. 1.—Id. Pl. Enl. p. 631. f. 2.

Troglodyte ordinaire, Temm. Man. d'Ornith. v. 1. p. 233.

Zaun-Sanger, Meyer, Tasschenb. Deut. v. 1. p. 215. A.

Wren, Br. Zool. 1. No. 154.—Arct. Zool. 2. No. 322.—Will. (Ang.) p. 229.

t. 42.—Lath. Syn. 4. p. 506. 143.—Lewin's Br. Birds, 3. t. 111.—Mont.

Ornith. Dict.—Walc. Syn. 2. t. 242.—Pult. Cat. Dorset. p. 7.—Bewick's

Br. Birds, 2. p. 227.

PROVINCIAL—Kitty Wren, Kitty.

THE Wren is indigenous, and is found in all parts of this kingdom; inhabiting even the Northern Isles of Scotland, as it is classed by Low, in his "Fauna Orcadensis," as a constant resident there. Although, like the Redbreast, it frequently approaches our out-houses and gardens, it is yet a bird of very retired habits, and is generally seen alone, except during the immediate pairing season.—Its song is powerful in note, and sweetly varied; and when uttered (as is frequently the case) during the gloom of winter, acquires an additional interest.—This little warbler begins to prepare Nest, &c. its nest as early as the month of March, of curious structure, and generally placed under the thatch, or other covering of out-houses, against the stem of an ivy-clad tree, or in some cavity under an impending branch, or prominent piece of rock. It has been observed by an eminent ornithologist, that the Wren varies from other birds in the construction of its nest; not proceeding, as is usually done, by raising the

fabric from the base upwards ; but by first tracing the general outline of an oval form, against the tree, bank, or other place it may have selected, firmly fixing it by the upper part, and back, in its required position. After this it proceeds gradually to enclose the sides, leaving only a small neatly-finished aperture near the top. The inside of this mansion then receives a warm lining of feathers.

It is worthy of remark, that the external materials of the nest are always admirably adapted in colour to the situation it is to occupy. Thus, on trees over-run with ivy, the outer coat is entirely composed of the fresh and greener mosses ; but on a stump, or rock-grey with lichens and withered grass, the nest will be found to be built either of those substances, or of others coinciding in general effect. In this secure depository it lays from six to eight eggs, of a yellowish-white, speckled, principally at the larger end, with reddish-brown. The young, if undisturbed, continue to return at roosting-time to the nest in which they were bred for a considerable time after they are able to fly, and provide for themselves.

In very severe winters, particularly such as are attended by great falls of snow, numbers of these birds perish, from the failure of their appropriate food. Under these circumstances, they retire for shelter into holes of walls, and to the eaves of corn and hay stacks ; and I have frequently found the bodies of several together in old nests, which they had entered for additional protection and warmth during severe storms.

The food of the Wren consists of various winged insects, Food. of worms, and of larvæ. Its flight is generally very low, and limited to short distances, and it seems to depend less upon that for safety, than on the facility with which it can creep from observation into small holes and crevices.

PLATE 47. Fig. 5. Natural size.

Bill much curved, colour brown. Irides chestnut-brown. General description.
Head and upper parts of the body pale chestnut-brown, inclining towards the tail-coverts to reddish-brown, and

faintly marked with transverse bars of a deeper shade. Greater coverts and secondaries barred with blackish-brown. Greater quills barred with blackish-brown, and reddish-white. Over the eyes is a pale whitish or wood-brown streak. Under parts pale wood-brown. Legs yellowish-brown. Tail short, reddish-brown barred with blackish-brown, and always carried erect.

The female does not vary from the male bird in colour or markings.

GENUS UPUPA, LINN. HOPOE.

GENERIC CHARACTERS.

BILL long, compressed, slender, subulated, and curved. Nostrils basal, egg-shaped, and open. Feet with three toes before, and one behind; the tarsus short; the outer toe joined to the middle one as far as the first joint; hind toe strong. Claws short, sharp, hooked, and deeply grooved beneath. Tail composed of ten feathers, square at the end. Wings long and ample; having the first quill short; the third and sixth nearly equal; and the fourth and fifth the longest.

This genus contains only two species. The others (included in the genus Upupa of LATHAM, &c. and known by the name of *Promerops*), have, as possessing essentially different generic characters, been formed into a separate genus. Some other birds also, improperly introduced into this genus, have been removed, and classed according to the true characters and affinities they exhibit.

HOOPOE.

UPUPA EPOPS, Linn.

PLATE XL. FIG. 2.

- Upupa epops, Linn. Syst. 1. p. 183.—Gmel. Syst. 1. p. 466.—Lath. Ind. Ornith. v. 1. p. 277.—Raïi Syn. p. 48. A. 6.—Will. p. 100. t. 24.—Briss. 2. p. 455. t. 43. f. 1.*
La Huppe, Buff. Ois. v. 6. p. 439. t. 21.—Id. Pl. Enl. 52.—Temom. Man. d'Ornith. v. 1. p. 415.—La Vaill. Ois. de Parad. et Prom. v. 3. pl. 22.
Gebauduter Werdehope, Meyer, Tasschenb. Deut. v. 1. 114.—Frisch. Vög. t. 43.
Hoopoe, Br. Zool. 1. No. 90. t. 39.—Arct. Zool. 2. p. 283. A.—Will. (Ang.) p. 145.—Albin. 2. t. 42, 43.—Edw. t. 345.—Lewin's Br. Birds, t. 54.—Lath. Syn. 2. p. 687. 1.—Id. Supp. p. 122.—Mont. Ornith. Dict.—Bewick's Br. Birds, v. 1. 123.—Pult. Cat. Dorset, p. 7.—Walc. Syn. 1. t. 53.—Don. Br. Birds, 1. t. 9.—Shaw's Zool. v. 8. p. 135.

A FEW of these handsome birds generally visit Great Britain every year, during their periodical migrations; and instances are recorded of their having even bred in this country. MONTAGU makes mention of a pair that had begun a nest in Hampshire, but, upon being disturbed, forsook it, and went elsewhere; and LATHAM, in the Supplement to his General Synopsis, adverts to a young Hoopoe, shot in the month of June.

The specimen in my possession, and from which the figure in this work is taken, was caught, after some severe weather, and overcome by fatigue, upon the sea-coast of Northumberland, near to Bamburgh Castle. It lived but a few days after its capture, sickening and dying for want of proper food. Whilst undisturbed, it carried its beautiful crest in a decumbent state, but the feathers were immediately erected upon the least alarm.—This bird is abundantly met with in the south of Europe, during the summer months, and is also common in Holland, in the northern parts of Germany, in Denmark, and as far north as Sweden. In the winter, it retires to Asia and Africa, where it is also found as a per-

manent resident, being known to breed in the towns and villages of Egypt.

In this latter country, it has been observed, that the wild or migrating birds of this species never associate with those which are indigenous (and which inhabit the towns in numerous flocks), but frequent, during their stay, remote and solitary places. The Hoopoe affects low and moist situations, in the neighbourhood of woods or thickets, and is mostly engaged upon the ground in hunting after its food,

Food.

viz. insects and worms.* Of the former, those of the coleopterous order are its chief favourites. It may sometimes be

seen hanging from the branches of trees, in search of the insects that chiefly dwell on the under sides of the foliage.—It

Nest, &c.

builds in the holes of decayed trees, but when these situations cannot be obtained, will make use of the crevices of walls and rocks. The nest is formed of dry grass, lined with feathers, or other soft materials; and it lays four or five eggs, of a greyish-white, spotted with hair-brown. The nest becomes very fetid, from the accumulation of remains of the insects with which it feeds its young, and probably also from the droppings of the latter.

PLATE 40. Fig. 2. Natural size.

General
descrip-
tion.

Bill black, pale flesh-red towards the base. Irides umber-brown. Crest composed of two rows of elongated feathers, orange-brown, passing in many specimens into white adjoining the tip, which is black, and which it can erect or depress at pleasure. Head, neck, and breast, of a reddish-grey colour. Upper part of the back of a very pale broccoli-brown, tinged with grey; the lower part black, with a mesial band of white, of

* A specimen shot at Falloden in Northumberland, in October 1832 (and which, upon dissection, proved to be a male), had the stomach, which is a membranous bag, filled with the larvae of *Tipulæ* and *Phalænæ*; no remains of perfect insects, nor any shards of beetles being visible. The intestines were of considerable diameter, but short.

an angular form, stretching from the exterior margin of each wing. Wings having the greater quills black, with a bar of white within about an inch of their tips. The two inner secondaries and tertials barred with black and white. Tail black, with a large V-shaped white mesial bar ; abdomen white ; the flanks having a few longitudinal brown streaks. Legs grey, tinged with broccoli-brown.

The Female differs in having the crest shorter, and the tints of her plumage not so bright as those of the Male bird.

FAMILY IV. CULCULIDÆ.

THE Culculidæ, which form the fourth family of the *Scansorial* tribe, is typified by the genus *Cuculus*, as now restricted, containing only such species as agree in characters and habits with our well known summer visitant, the Common Cuckoo. By the earlier writers a great variety of birds, connected no doubt by direct affinity, but differing in parts of their organization, as well as in their economy, were all included under the same generic title *Cuculus* ; thus forming an extremely artificial group. The most striking of these have since been separated, and made the types of new genera ; but much still remains to be done in tracing out the affinities, and determining the precise situation in which other aberrant species should stand. The following are some of the genera already established, viz. *Coccyzus* (VIEILL.), nearly allied to the true Cuckoos in form of bill and general appearance, but differing in economy, and confined to the New World ; *Indicator* (VIEILL.), containing the *Honey-guide*, with a short, strong, depressed bill, and natives of Southern Africa ; *Centropus* (ILLIG.), also African, distinguished by a strong and arched bill, harsh plumage, and the inner hind toe armed with a long, straight, subulated claw ; *Phœnico-*

phaus (VIEILL.), belonging to the warmer regions of the ancient continent, with the bill very large and arched, forming the medium by which this family becomes immediately connected with the *Ramphastidae*, the family with which the circle of the tribe commences; *Leptosomus* (VIEILL.) represented by *Cuculus acer* (Auct.). The genus *Crotophaga* (LINN.), also appears to stand upon the confines of the *Cuculidae*, and to connect them with the *Musophagidae*, a family, according to MR SWAINSON, belonging to the *Conirostral* tribe, but included in the present one by MR VIGORS "On the Arrangement of the Genera of Birds."

In Britain we find but one species of the genus *Cuculus*, as now restricted, a periodical summer visitant, well known from its peculiar cry, and as being the harbinger of spring.

GENUS CUCULUS, LINN. CUCKOO.

GENERIC CHARACTERS.

BILL rather compressed, slightly curved, of mean length. Gape wide. Lower mandible following the curve of the upper. Nostrils basal, round, margined by a naked and prominent membrane. Wings of mean length, acuminate, the first quill-feather short, the third being the longest. Tail more or less wedge-shaped. Feet with two toes before, and two behind, the outer hind-toe partly reversible; the anterior toe joined at the base, those posterior entirely divided. Tarsi very short, feathered a little below the knee.

The members of this genus are natives of the warmer regions of the Old Continent. They construct no nest, but deposit their eggs in the nests of small birds, to whom they consign the care of hatching and rearing their young. They are fierce in disposition, and live solitary. The food of the genus is principally composed of the larvæ of the lepidopterous order of insects.

COMMON CUKOO.

CUCULUS CANORUS, Linn,

PLATE XXXVII. AND PLATE XLV. *** FIG. 1.

- Cuculus canorus, Linn.* Syst. 1. p. 168. 1.—*Gmel.* Syst. 1. p. 409. sp. 1.—*Raii* Syn. p. 23.—*Will.* p. 6. t. 10. 27.—*Briss.* 4. p. 105. 1.—*Lath.* Ind. Ornith. v. 1. p. 207. 1.
Cuculus hepaticus, Lath. Ind. Ornith. v. 1. p. 215. sp. 25.
Le Caucou gris, Buff. Ois. v. 6. p. 305.—*Id.* Pl. Enl. 811.
Le Vaill. Ois. d'Afric. v. 5. pl. 202. and 200.—*Temm.* Man. d'Ornith. v. 1. p. 382.
Asch-Grauer order *gemeine Kukuk, Bechst.* Naturg. Deut, v. 2. p. 1120.—*Meyer, Tasschenb.* Deut. v. 1. p. 110.—*Frisch.* Vög. t. 40.
Cuculus canorus rufus, Gmel. Syst. 1. p. 409. sp. 1. var. B.—*Lath.* Ind. Ornith. v. 1. p. 208. var. B.
Common Cuckoo, Br. Zool. 1. No. 82. pl. 36.—*Aret. Zool.* 2. p. 266. A.—*Lewin's Br. Birds,* t. 42.—*Haye's Br. Birds,* t. 17. 18.—*Lath. Syn.* 2. p. 509. 1.—*Id. Supp.* p. 98.—*Mont. Ornith. Dict.*—*Id. Supp.*—*Bewick's Br. Birds,* p. 108.—*Shaw's Zool.* v. 9. p. 68.

PROVINCIAL—Gowk.

THE Cuckoo makes its appearance with us in the month of April, and departs again about the latter part of June, or the beginning of July. But the young birds are often observed to remain for a much longer period, and I have shot them as late as in the month of September. The reputed story of the Cuckoo making no nest of its own, but depositing its egg in that of some other bird, to be hatched, and the young one reared by foster-parents, has, within these late years, been fully substantiated, and found to have its origin in fact. A very interesting paper on this subject, by Dr JENNER, is given in the Philosophical Transactions for 1788, to which, and the very apposite and curious observations of Mr MONTAGU on the economy of this bird, in the Introduction to his Ornithological Dictionary, I beg to refer my readers. It appears that the nest of the Hedge-Accentor (*Accentor modularis*), is the one most frequently selected by the Cuckoo in the south of England; sometimes, however, that of the Yellow-hammer (*Emberiza citrinella*), the Wag-

Periodical visitant.

tail (*Motacilla alba*), and the Meadow-Pipit (*Anthus pratensis*), answer its purpose.

In Northumberland, constant experience tells me, that the nest of the last mentioned bird is the one almost always chosen. Taking advantage of the absence of its dupe, during the time of laying (which generally occupies four or five days), the Cuckoo deposits its egg among the rest, abandoning it, from that moment, to the care of the foster-parent. As the same period of incubation is common to both birds, the eggs are hatched nearly together, which no sooner takes place, than the young Cuckoo proceeds instinctively to eject its young companions, and any remaining eggs, from the nest. To effect this object, it contrives to work itself under its burden (the back, at this early age, being provided with a peculiar depression between the shoulders), and shuffling backwards to the edge of the nest, by a jerk rids itself of the incumbrance; and this operation is repeated, till the whole being thrown over, it remains sole possessor. This particular tendency prevails for about twelve days, after which the hollow space between the shoulders is filled up; and when prevented from accomplishing its purpose till the expiration of that time, as if conscious of inability, it suffers its companions to remain unmolested. The egg of the Cuckoo is very small in proportion to the size of the bird, which circumstance is in close connection with the instinct, that directs it to choose for its depository the nest of a smaller species. If it selected that of a larger bird, the offspring that its young one would have to contend with, being its equal, perhaps its superior, in size and weight, would consequently frustrate the design, and the young Cuckoo would perish in the vain endeavour at the sole possession of the nest. It is an opinion very commonly entertained, that this bird sucks the other eggs in the nest, where it deposits its own, but there appears to be no reason for supposing this to be the case; the belief has, without doubt, arisen from the fact of the young Cuckoo being so often found sole tenant, after the expulsion of

its copartners. It has been suggested by MONTAGU, and I should think, with great probability, that the Cuckoo may possess the power of retaining its egg in the oviduct at pleasure, otherwise it would be difficult to account for some phenomena connected with its history.

The continuation of the species appears to require such a provision to have been granted, for, as he observes, if the Cuckoo was obliged, like other birds, to lay its eggs, five or six in number, successively day after day, it is hardly probable it should find (within that time) sufficient nests in the exact state to receive them; much less, if it laid a greater number of eggs, as has been suggested. The rare occurrence of the Cuckoo's egg being found, gives additional strength to this supposition, for although the old birds may be seen in abundance, such a discovery has seldom been made.

Naturalists have been puzzled to account for this bird not performing the office of incubation, but as their researches have principally been directed to the anatomical structure, in which point it does not essentially differ from many others that perform this office, we arrive by these means at nothing satisfactory. The above peculiarity of this remarkable genus must not probably be looked for in any principle of conformation, but must be explained from their habits and economy.

Let it be remembered these birds are migratory, and that the period during which the adults remain with us, is very short; but the propagation of the species must be effected during that period. Now, as their arrival does not take place before the month of April, and the egg is seldom ready for incubation before the middle of May, there would not be a sufficient length of time for the young to be hatched, or (making every allowance,) sufficiently fledged to accompany the old birds at the period of their departure, which seldom or never extends beyond the first week in July.

The egg requires a fortnight's incubation, and the young

are not able to fly in less than five or six weeks, which facts have been ascertained from repeated observation.

From what has been above written, it will be evident that I do not lean to the opinion of those who think that the Cuckoo remains in this country during the winter, in a state of torpidity, concealed in the hollows of trees, or in the thickest parts of furze-bushes. One or two instances of such an occurrence are not sufficient authority upon which to build a general assertion, with respect to the species; and I should conceive that those denuded Cuckoos mentioned by WILLOUGHBY and BEWICK as thus discovered, must have been young birds of late hatchings, not sufficiently strong to leave this country even at the latest period of migration. Attempts to rear the Cuckoo have often been made, but hitherto unsuccessfully, as it never reaches to the succeeding spring *. I have not been able to keep them alive beyond the month of February, although supplied with abundance of natural food; and it is scarcely necessary to add, that they never shewed any signs of torpidity, nor any wish to hybernate.—The natural food of the Cuckoo consists of insects, particularly the hairy larvæ of some of the lepidopterous order: one of these it first kills, by passing it through the sharp *tomia*, or edges of its mandibles, it then adroitly cuts off the hinder end, and, by repeated jerks, frees the caterpillar of the intestinal canal, after which it swallows it whole. The well-known notes of the Cuckoo are confined to the male, the female making only a chattering noise. It is a bold and fierce bird, and when handled, even at an early age, ruffles its feathers, and defends itself with eagerness.

PLATE 37. Figure of the natural size.

General
descrip-
tion.
Adult Bird

Bill blackish-brown, yellowish at the base. The corners of the mouth, and the rim round the eyes, orange. Irides gamboge-yellow. Gape orange-red. Head, neck,

* I have since learnt that the Cuckoo has been kept over winter, and attained maturity in confinement.

breast, and upper parts, deep bluish-grey, darkest upon the wing-coverts. The whole of the belly, thighs, and under tail-coverts white, with transverse black bars. Inner webs of the quill-feathers with oval white spots. Tail black, with a few small white oblong spots along the shafts of the feathers, the tips white. Legs lemon-yellow, the outer hind-toe being reversible. The female differs in no respect from the male.

PLATE 43. Fig. 1. Represents a young Cuckoo, as receiving food from its foster-parent, a Meadow-pipit.

The upper parts of the plumage are of a deep clove-brown colour, tinged with grey, margined and spotted with reddish-brown. Feathers upon the forehead margined with white, and on the hind part of the head is a patch of white. The oval spots on the inner-webs of the quills reddish-brown. Throat and under parts yellowish-white, with transverse black bars. Irides liver-brown. Legs and toes primrose-yellow.

The young females have more of the reddish-brown disposed over their plumage, and have little or no appearance of the white patch upon the forehead and hind part of the head. In this plumage, and till after the second moult, they answer to *Cuculus hepaticus*.

ORDER III

RASORES. *ILLIG.*

As no members of the fifth or *Tenuirostral* Tribe of the *Insessores* are found in Britain, we are next led to the Rasores of *ILLIGER*, forming the Third Order of the Class Aves, which order, in addition to the Gallinaceous birds (*Gallinæ* of former authors), embraces the *Columbæ* kind, and the *Struthiones*; this last group containing some of the largest species of the feathered race, as the Ostrich, Cassowary, &c. As those orders whose members exhibit a structure the most generally perfect, that is, adapted for the most extensive sphere of action, are considered the *typical* representatives of this class, the one now under consideration having its members generally deficient both in the power of flight and in the faculty of grasping with the feet, and exhibiting a corresponding weakness in particular parts of their anatomy, forms what is called the *Aberrant* Division of the Class. It is not, however, to be inferred that the structure of these last birds, so far as it is calculated to promote their peculiar economy, is less perfect than that of the typical orders; for, although deprived, by the shortness of their wings, of that extensive power of flight possessed by the *Raptore*s and *Insessores*, and unable, from the formation of their feet, to perch with the same firmness and security, these disadvantages are admirably counterbalanced by the peculiar and powerful structure of such parts as are most necessary to their welfare in the station they hold. Thus we find, in the groups of this order, whose security principally depends upon the swiftness and continuance of their running, that the limbs are fully developed, and furnished with muscles of extraordinary power, and the feet constructed upon a plan

widely different from what we behold in the former orders ; the toes being short, and strengthened by a membrane connecting them at the base ; with the hind toe either entirely wanting, or but imperfectly developed. Where this latter does exist, it is not articulated upon the same plane as the other toes (as we have seen it in the former orders), but upon the *tarsus*, at a height greater or less, according to the cursorial powers of the species.

The five prominent divisions or families, which seem to compose the circle of this order, are the *Columbidæ*, *Phasianidæ*, *Tetraonidæ*, *Struthionidæ*, and *Cracidæ*, all (except the fourth and fifth) connected together by a beautiful chain of affinities. By the *Columbidæ*, whose feet, in some of its component groups, approach nearest in structure to those of the preceding orders (but whose anatomy and general habits class them among the typical *Rasores*), the necessary connection is sustained with the *Insessores*. This conformation of the feet, however, we see decrease as the species approach gradually nearer in form and habits to the true gallinaceous birds, exemplified in the Great-crowned Pigeon (*Lophyrus*), the Nicobar Pigeon, &c. The near connection of the *Phasianidæ* (or perhaps, as it ought to be called, the *Pavonidæ*) with the *Tetraonidæ*, is too apparent to require comment. The passage from the latter family to the *Struthionidæ* seems to be effected through the genus *Tinamus*, and other nearly allied birds ; where the feet are tridactyle, and the bill approaches very closely in form to that of the American *Rhea*, a bird almost equalling the Ostrich in size, and, like it, deprived of the power of flight. The immediate bond of union between the *Struthious* birds and the *Cracidae* is not at present so apparent, requiring the intervention of some connecting form (perhaps the *Didus*, or Dodo, now supposed to be extinct) ; but the affinity of the latter group to the *Columbidæ*, with which the circle commenced, is shewn in the structure of the feet, and in other particulars of form, as well as in habits, of certain species of the genera *Penelope*, *Ortalida*,

&c. Of the fifth family of the present order (Cracidæ) we have no examples in Europe.

FAMILY I, COLUMBIDÆ, LEACH.

THE birds of this family (which forms the first of the Rassorial Order), were arranged by the earlier systematists alternately among the *Passerine* and *Gallinaceous* birds; or even as an order separate from both, and holding as it were an intermediate station. A close investigation, however, of their anatomy, both external and internal, of their habits and food, evidently proves that their affinity to the Gallinaceous or typical Rasores is much stronger than that which connects them with the *Insessores*, though the latter is sufficiently strong to support the required connection between the two. By former writers, the various birds contained in this family were arranged under one genus (*Columba*), notwithstanding the difference of character and form exhibited by many groups, particularly apparent in such as approach nearest to the Gallinaceous families. Others, after the example of TEMMINCK, have adopted a sectional division; but I prefer the plan of distinct genera, as countenanced by several eminent ornithologists of our day. In addition to the genus *Columba*, as now restricted (of which *Columba ænas* may be regarded as the type), the present family contains the genus *Vinago* (Cuv.), in which the bill is much thicker and stronger, and the feet better adapted for perching; *Ptilonopus* (SWAINS.); and *Lophyrus* (VIEILL.), in which genus the wings become concave, short, and rounded, the tarsi lengthened, and the whole form more assimilated to the birds of the next family. The food of the Columbidæ consists of grain and seeds, as well as the fruit, or *mast*, of certain trees and shrubs. Some of the species build their nests in trees, and lay but two eggs (incubated by both sexes alternately), and the young are there reared till able to fly.

Others, which approximate nearer to the typical groups (as the *Nicobar* and *Carunculated* Pigeons), breed upon the ground, laying several eggs, and the young, when hatched, are covered with down, and follow their mothers like Chickens, or young Partridges. In Britain, we only possess examples of the genus *Columba*, as now restricted.

GENUS COLUMBA, LINN. DOVE.

GENERIC CHARACTERS.

BILL of mean strength, strait at the base; with the tip or horny point compressed and deflected. Base of the upper mandible covered with a soft protuberant cartilaginous substance, in which the nostrils are lodged towards the middle of the bill, forming a longitudinal cleft. Feet with three toes before, entirely divided, and with one hind toe, articulated on the heel. Claws short, and strong; blunt. Wings of mean length, and acuminate; the first quill rather shorter than the second, which is the longest.

The observations made upon the family are equally applicable to the genus, and to the particular species found in Britain, all of which belong to that section styled by TEMMINCK* and CUVIER "Colombes, ou Pigeons Ordinaires." The moult of the four European species is simple, and the plumage of both sexes nearly similar. It is from this genus, and from a particular species (*Columba livia*) that our common dove-cot pigeon has sprung; as well as the other numerous varieties so highly cultivated and prized by pigeon-fanciers.

* See Mons. TEMMINCK's splendid work, entitled, " Histoire Naturelle générale des Pigeons et Gallinacées."

RING-DOVE OR CUSHAT.

COLUMBA PALUMBUS, Linn.

PLATE LVI. FIG. 1.

- Columba Palumbus, Linn.* I. p. 232. sp. 19.—*Faun. Suec.* No. 206.—*Gmel. Syst.* I. p. 796. sp. 19.—*Lath. Ind. Ornith.* v. 2. p. 601. sp. 32.—*Briss.* I. p. 89. 6.
Palumbus torquatus. Raii Syn. p. 62. A. 9.—*Will.* p. 135. t. 35.
Le Pigeon Ramier, Buff. Ois. v. 2. p. 531. t. 24.—*Id. Pl. Enl.* 316.—*Temm. Pig. et Gall.* v. 1. p. 78.—*Id. fol. pl. 2.*
Colombe Ramier, Temm. Man. d'Ornith. v. 2. p. 444.
Ringel Taube, Bechst. Naturg. Deut. v. 3. p. 949.—*Meyer, Tasschenb. Deut.* v. 1. p. 286.—*Frisch, Vög.* t. 138.
Ring Duijf, Sepp. Neperl. Vög. v. 1. t. p. 9.
Ring Pigeon, Br. Zool. I. No. 102.—*Arct. Zool.* 2. p. 329. B.—*Will. (Angl.)* p. 185. t. 35.—*Lath. Syn.* 4. p. 635. 29.—*Id. Supp.* p. 198.—*Lewin's Br. Birds,* 4. t. 129.—*Albin. II. t. 46.*—*Pult. Cat. Dorset.* p. 7.—*Wale. Syn.* 2. t. 187.
Ring Dove, Mont. Ornith. Dict.—*Bewick's Br. Birds,* I. t. p. 270.

PROVINCIAL—Quest, Wood Pigeon, Cushat.

THE Ring-Dove is the largest of the European species. It is indigenous with us, and is met with in all wooded and enclosed parts of the kingdom, and is not anywhere migratory, as has been supposed and asserted by some of our naturalists. It is amongst the earliest breeders of our native birds, usually pairing, and uttering its cooing notes, towards the latter part of February, at which time it also commences a peculiar flight, by rising and falling in the air, and, when at its greatest elevation, bringing the upper surfaces of its wings so forcibly into contact as to be heard at a considerable distance. This mode of flight is confined to the male bird.

The Cushat usually produces two or three broods in the course of the year, but never more than two young birds at the same hatching.

Nest, &c. The nest is wide and shallow formed of small twigs loosely put together, and placed in an upper fork, or amidst the close branches of some moderately tall tree, those of the fir tribe being chiefly preferred; and the ivy encircling them,

or creeping over the face of rocks, is not unfrequently selected for its site. The eggs, two in number, are of an oval form, and white. Both sexes sit alternately upon them, and the young are fed from the macerated contents of the parent's craw. In winter these birds assemble in very numerous flocks, resorting, during open weather, to the stubble-lands ; at which time their flesh is excellent, strongly resembling, and being little inferior to, that of the Grouse (*Tetrao Scoticus*) for the table.

As severe weather advances, and the ground becomes covered with snow, they are obliged to subsist on the tops of turnip, rape, and other cruciform plants of the same family, as well as on holly berries ; which diet soon renders their flesh strong and unpalatable. At this season, they roost together in large woods, preferring those which abound in fir, or lofty ash trees, the stiff branches of which offer both a firm and horizontal perch during the hours of repose.

The Cushat feeds upon all kinds of grain, and is particularly fond of pease and the other leguminous plants. In the south of England, where beech-mast and acorns are abundant, these form its principal support during the autumn, and, from the weak texture of its bill, it is compelled to swallow them whole.

Food.

Many attempts have been made to domesticate this species, but without success* ; for, although they may be rendered very tame when in confinement, they will not breed either by themselves, or with the Common Pigeon ; and, upon being set at liberty, immediately betake themselves to their natural haunts, and return no more.

The species is found throughout the greatest portion of Europe, but more abundantly in the southern parts, where it is sedentary. In the northern regions they are commonly migratory birds.

* See MONTAGU's description of this bird in the first volume of the Ornithological Dictionary.

PLATE 56. Fig. 1. Natural size.

General description.

Bill orange; the basal or soft part covered with a white mealy substance. Head, cheeks, neck, and lower parts of the back bluish-grey. Upper part of the back and wing-coverts deep bluish-grey. Quills blackish-grey, margined with white. On the side of the neck is a patch of white. Breast and belly brownish-purple-red, with glossy green reflections. Thighs and under tail-coverts bluish-grey. Legs and toes pale purplish-red. Irides yellowish-white.

STOCK-DOVE.

COLUMBA ÆNAS, Linn.

PLATE LVI.* FIG. 1.

Columba Ænas, Linn. Syst. 1. p. 279. 1. B.—*Gmel.* Syst. 1. p. 769. sp. 1.—*Lath.* Ind. Ornith. v. 2. p. 589. sp. 1.—*Briss.* Orn. v. 1. sp. 6.—*Raii* Syn. p. 62. A. 10.—*Will.* p. 136. t. 35.
Colombe colombin, *Temm.* Pig. et Gall. v. 1. p. 118.—*Id. edit. fol.* pl. 11.—*Id. Man. d'Ornith.* v. 2. p. 445.
Holtz Taube, *Bechst. Naturg. Deut.* v. 3. p. 957.—*Meyer,* Tasschenb. Deut. v. 1. p. 287.—*Frisch,* Vög. t. 139.
Derbosh Duif, *Sepp,* Vög. v. 5. t. p. 407.
Stock-Pigeon, Br. Zool. 2. App.—Arct. Zool. 2. p. 329. A.—*Will.* (Angl.) p. 185.—*Lath.* Syn. 4. p. 604. 1.—*Id. Supp.* p. 197.

FEW of our writers, when describing the *Columba Ænas*, seem to have been aware of the specific distinction that exists between it and the *Columba livia* of BRISSEON (Rock-Dove), but have mixed up the history and individuality of both, considering them either as the same bird, or, perhaps, as mere varieties of the same species. MONTAGU's description, in the Ornithological Dictionary (under the article 'Rock-Dove'), refers only to the *Columba livia*, although the Latin synonyms of the other species are attached to it; and it does not appear that the true *Columba Ænas* ever came under his observation.

The present species is indigenous to this country, but

limited to certain districts. It is common in Hertfordshire, and some of the midland counties, but I have not been able to trace it into any of the northern parts of the island, nor does it appear to be bred in those counties farther to the south or west; although I am inclined to believe, that the vast flocks mentioned by PENNANT and MONTAGU, as frequenting the beech-woods during the winter, must have been of this species; probably visitants, or in a course of migration from some of the northern provinces of Europe. In its habits this bird resembles the Ring-Dove, and is a constant inhabitant of woods, breeding in the hollows of old and pol- Nest, &c. lard trees. The eggs are white, similar in size and shape to those of the Common Pigeon. This species has erroneously been considered the original of our tame pigeons, the succeeding one (the Rock-Dove) being, without doubt, the *true* parent stock; many of our varieties still retaining the distinctive marks of that species, in the white rump, and the double black band or bar across the closed wings.

In winter, Stock-Doves assemble in large flocks, which are sometimes found associated with the Ring-Dove.

Like the latter, they feed upon all grain and seeds, and for their winter's supply have recourse to the same diet. They are very abundant in the southern parts of Europe; but always found to inhabit woods in the interior of each country. In Germany, and in some parts of France, they are regularly migratory. They occur also in Africa, but do not extend to the southward of the Tropic.

PLATE 56.* Fig. 1. Natural size.

Head and throat deep bluish-grey. Sides of the neck General glossed with different shades of green and purple; the description. feathers shorter, more distinct, and stiffer than those of the Rock-Dove. Lower parts of the neck and breast pale lavender-purple. Belly, thighs, and under tail-coverts bluish-grey, with a slight purplish tinge. Back deep bluish-grey. Wing-coverts paler, and some of the

greater ones spotted and barred with black, but not forming any *defined* bar, as in the above-mentioned species. Quills blackish-grey; the outer webs, near the base of the feathers, passing into bluish-grey. Lower part of the back and tail-coverts bluish-grey. Tail bluish-grey, with a broad black bar at the end; and having the outermost feather margined with white. Wings, when closed, reaching to about half the length of the tail. Irides brownish-red. Legs and toes bright cochineal-red.

The female scarcely differs from the male bird, except that the iridescent reflections upon the neck are not so bright.

ROCK-DOVE.

COLUMBA LIVIA, Linn.

PLATE LVI.* FIG. 2.

Columba livia, Briss. Ornith. v. 1. p. 82. sp. 3.—Lath. Ind. Ornith. v. 2. p. 590. sp. 2. var. B.

Colombe Biset, Buff. Ois. v. 2. p. 498.—Id. Pl. Enl. 510.—Temm. Pig. et Gall. v. 1. p. 125.—Id. edit. fol. pl. 12.—Id. Man. d'Ornith. v. 2. p. 446. Haustaube, Bechst. Naturg. Deut. v. 3. p. 971.—Meyer, Tasschenb. Deut. v. 1. p. 283.

Biset, and White-rumped Pigeon, Lath. Syn. 4. p. 605. 2. A.

Rock Dove, Mont. Ornith. Dict.—Id. Sup.

The Wild Pigeon, Bewick, 1. p. t. 267.

The Common Pigeon, or Wild Dove, Low's Faun. Orcad. p. 52.

PROVINCIAL—Rockier.

ALTHOUGH this species seems to have fallen frequently under the notice of our ornithologists (as may be gathered from their descriptions, and the localities they have given to it), yet it has evidently always been attended by the original supposition of this and the preceding species being identical. In form and size they very nearly agree; the Rock-Dove being, perhaps, rather more slender. The predominant shades of each are also much the same; the principal varia-

tions consisting in the colour of the rump, which, in the *Columba Ænas*, is invariably bluish-grey, but in the present species generally white; in the two distinct bands or bars crossing the wings of the latter bird; and in the colour of the breast and belly, which, in the former, is more of a purplish-red. The dissimilarity of their habits, however, marks even more strongly the specific difference between them, than the proofs drawn from the plumage, since (as I have already mentioned the Stock-Dove to be a constant inhabitant of woods, and to frequent the *interior* of the country), the species now under consideration is, in its wild state, always met with inhabiting rocky places, and those principally on the sea-coast. In Britain, it is found in various cliffs along the wide extent of our shores, of which I may here mention those of Caldy Island, in South Wales;* and is also a never-failing resident in the wild precipices of the Orkneys, breeding in the caves, which are there numerous, and of large dimensions; and where, according to Low, it retires to the inmost recesses, beyond the situations chosen for incubation by the Auks, Gulls, and other aquatic fowls.

It is very numerous in the rocky islands of the Mediterranean, where it also lives and breeds in caverns on the shore; and is equally abundant in the north of Africa, especially in the Island of Teneriffe, where it is met with in incredible numbers.

With us, and indeed throughout Europe, it is better known as in a state of voluntary subjection, inhabiting buildings made purposely for its reception, or betaking itself to ruinous edifices, church towers, &c. It is from this species that most of our curious varieties of Pigeon have arisen; for some later ones may have been derived from crosses with other species. Of these various kinds, LATHAM enumerates

* It also inhabits the caves in the cliff at St Abb's Head, on the Berwickshire coast, in considerable numbers, as well as those in the Isle of Bass, in the Frith of Forth.

Eggs. upwards of twenty,* all of which are highly prized by connoisseurs.—The Rock-Dove lays two white eggs, of an oval form, and breeds twice or thrice in the year; but probably oftener in its tame state. It feeds upon all sorts of grain and seeds, and, according to MONTAGU, is very fond of the different Limaces, particularly of that which inhabits the *Helix virgata*.

Food.

General
descrip-
tion.

PLATE 56.* Fig. 2. Natural size.

Bill blackish-brown. Irides pale reddish-orange. Head and throat deep bluish-grey. Sides of the neck, and upper part of the breast, dark lavender-purple, glossed with shades of green and of purple-red. Lower part of the breast and belly blue-grey. Upper part of the back and wing-coverts pale pearl-grey. Greater coverts and secondaries barred with black, and forming two broad and distinct bands across the closed wings. Lower part of the back white. Rump and tail-coverts bluish-grey. Quills grey at the base, but passing into bluish-grey towards their tips. Tail deep bluish-grey, with a broad black bar at the end. Legs pale purplish-red. Wings, when closed, reaching to within half an inch of the end of the tail.

* *Viz.* The Biset Pigeon, and the Rock, Roman, Rough-footed, Crested, Norway, Barbary, Jacobine, Laced, Turbit, Broad-tailed and Narrow-tailed Shaker, Tumbler, Helmet, Persian, Carrier, Pouter, Horseman, Smiter, Turner, and Spot Pigeons.

TURTLE DOVE.

COLUMBA TURTUR, Linn.

PLATE LVI. FIG. 2.

Columba Turtur, Linn. Syst. 1. p. 284. sp. 32.—*Gmel.* Syst. 1. p. 786. sp. 32.—*Lath.* Ind. Ornith. v. 2. p. 605. sp. 47.—*Raii* Syn. p. 61. A. 2.—*Will.* p. 134. t. 35.—*Briss.* 1. p. 92. 7.

Turtur auritus, Raii Syn. p. 184. t. 26.

La Tourterelle, Buff. Ois. v. 2. p. 545. t. 25.—*Id.* Pl. Enl. 394.—*Temm.* Pig. et Gall. v. 1. p. 305.—*Id.* edit. fol. pl. 42.—*Id.* Man. d'Ornith. v. 2. p. 448.

Turtel Taube, Bechst. Naturg. Deut. v. 3. p. 1076.—*Meyer,* Tasschenb. Deut. v. 1. p. 289.—*Frisch,* Vög. t. 140.

Tortel Duif, Sepp. Nederl. Vög. v. i. t. p. 11.

Common Turtle, Br. Zool. No. 103. t. 45.—*Albin,* 2. t. 47. & 48.—*Will.* (Angl.) p. 183. t. 35.—*Lath.* Syn. 4. p. 644. 40. var. A, B, C, D.—*Id.* Supp. p. 199.—*Haye's Br. Birds,* [t. 14.—*Lewin's Br. Birds,* 4. t. 130.—*Pult. Cat. Dorset.* p. 7.—*Walc.* Syn. 2. t. 188.

Turtle Dove, Mont. Ornith. Dict.—*Bewick's Br. Birds,* v. 1. t. 272.

THIS delicate bird is only a visitant of this country during the summer, arriving on our shores about the latter part of April, or the beginning of May, and departing, after incubation, as early as in the commencement of September. Its distribution here is even limited to two or three of the southern, and some of the midland counties. It is found most plentifully in Kent, where it breeds in the thickest woods; and is sometimes seen in flocks of twenty or more, frequenting the pea-fields as soon as the produce begins to ripen. MONTAGU states that it is found, though rarely, as far to the westward as Devonshire. I have never met with it in the northern counties as a summer resident, but a few individuals have been killed in Northumberland in the autumn, which were in all probability driven out of the course of their equatorial migrations from some of the northern provinces of Europe. The specimen that furnished the present drawing was killed upon the coast near to North Sunderland, in the above mentioned county, in the autumn 1818, and is now in my collection. BEWICK mentions a flock seen at

Prestwick Car, near Newcastle-upon-Tyne, in the autumn of 1794, and describes one of them that was shot, which appears to have been a bird of that year, as it wanted the black Nest, &c. patch on the side of the neck.—The Turtle-Dove builds in the closest woods, forming a shallow nest of small twigs, and laying two eggs (as is the case with the whole of this genus), of an oval shape, white, and almost half the size of those of the Common Pigeon.

It is found through all the temperate parts of Europe; but does not extend within the Arctic Circle. It is sedentary in some few of the southern provinces, but in most of them periodically migratory.

Food.

It feeds upon all sorts of grain and seeds. Its cooing notes are particularly plaintive, and are very frequently repeated during the months of spring and summer.

PLATE 56. Fig. 2. Natural size.

General descrip-
tion.

Head, neck, breast, and back, light wood-brown, tinged with pearl-grey. On each side of the neck is a patch of black feathers, margined with white. Scapulars and wing-coverts black, passing into bluish-grey, and deeply edged with buff orange, inclining to orpiment-orange. Greater quills brownish-black; secondaries bluish-grey. Belly and under tail-coverts white. Two middle tail-feathers clove-brown; the rest with their tips white; as is also the exterior web of the outermost feather. Irides reddish-orange. The naked space behind the eyes and ears pale purplish-red.

The wing-coverts of the female are not margined with so bright a colour as those of the male bird; and her head is of a deeper wood-brown.

FAMILY II. PHASIANIDÆ. *VIGORS.*

THE members of this natural and well-marked family are birds of a bulky and heavy form; their bodies abounding in muscular fibre, remarkable for its sweetness and excellent quality as food. Their short and concave wings, as well as other peculiarities of anatomical structure, render them unfit for distant or long-continued flight; but their strong limbs are perfectly adapted for speed, or continued exertion on foot. Their principal food consists of grain and seeds; but, in addition to these, some few eat roots, berries, or the buds of trees; and most of them devour insects. In the whole family the food undergoes maceration in the craw, previous to its entering the stomach or gizzard, which is, in this and the succeeding family, a receptacle possessing great muscular grinding power. Some members of the different genera that this group comprises, are polygamous; others pair regularly every year. Their nest is placed on the ground, amidst the herbage, and formed without much art. Their eggs are numerous, and the young, when first excluded, are covered with a soft down, and are immediately able to follow their parents, and to feed themselves. They scratch the earth with their feet in search of food; and are all addicted to the peculiar habit of rolling in dust, and working it into their feathers.

It is from this family that we have obtained our highly-prized domestic poultry, and all its varieties, together with the *Peacock* and *Turkey*; but we only possess one member in a natural or wild state, viz. the Common Pheasant (*Phasianus colchicus.*)

GENUS PHASIANUS, LINN. PHEASANT.

GENERIC CHARACTERS.

BILL of mean length, strong; upper mandible convex, naked at the base, and with the tip bent downwards. Nostrils basal and lateral, covered with a cartilaginous scale. Cheeks and region of the eyes destitute of feathers, and covered with a verrucose red skin. Wings short, the first quills equally narrowed towards their tips; the fourth and fifth the longest. Tail long; remarkably wedge-shaped; and composed of eighteen feathers. Feet having the three anterior toes united by a membrane as far as the first joint, and the hind toe articulated upon the tarsus, which, in the male birds, is furnished with a horny, cone-shaped, sharp spur.

The only wild European species of this genus, although originally a native of Asia, has for so many years been naturalized in this quarter of the globe, as to entitle it to hold a station in its Fauna; and the same apology may be offered for its introduction into the Ornithology of the British Islands. The sexes of this genus differ greatly in plumage; but in all the moult is ordinary and simple. The males are distinguished by the brilliancy of their plumage, and by various accessory ornaments; the other sex is clothed in fainter and more sombre hues. They are polygamous. The female makes an artless nest upon the ground, amongst the herbage, and lays a great number of eggs. The flesh of these birds is white, delicate, and highly esteemed.

COMMON PHEASANT.

PHASIANUS COLCHICUS, Linn.

PLATE LVII.

Phasianus colchicus, Linn. Syst. I. p. 270. 3.—*Gmel.* Syst. I. p. 741.—*Briss.* I. p. 262. 1.—*Raii* Syn. p. 56. A. 1.—*Will.* p. 117. t. 28.
Le Faisan vulgaire, Buff. Ois. v. 2. p. 328.—*Id.* Pl. Enl. 121. and 122.—
Temm. Pig. et Gall. v. 1. p. 289.—*Id.* Man. d'Ornith. v. 2. p. 453.
Der gemeine Fasan, Bechst. Naturg. Deut. v. 3. p. 1160.—*Meyer,* Tasschenb. v. 1. p. 291.—*Frisch.* Vög. t. 123.
 Common Pheasant, *Albin*, I. t. 25, 26.—*Will.* (Angl.) p. 163. t. 28.—*Lath.* Syn. 4. p. 712. 4.—*Haye's Br. Birds*, t. 20.—*Lewin's Br. Birds*. 3. t. 31.
Mont. Ornith. Dict. v. 2.—*Id. Supp.*—*Walc.* Syn. 2. t. 178.—*Pult. Cat.* Dorset. p. 7.—*Don,* Br. Birds, v. 5. t. 101.—*Bewick's Br. Birds*, v. 1. p. t. 282, ring-necked var.

ALTHOUGH the Pheasant has been for such a length of time a naturalised inhabitant of this country, the cause of its preservation must be referred, not so much to the wildness of its nature, as to the care and expense bestowed to that end by noblemen, and other considerable landed proprietors, without which the breed would, in all probability, have been long since extinct. Independent of the beauty of its plumage as an object of idle acquisition, the high estimation it bears at the tables of the wealthy and luxurious proves too tempting an inducement for the poacher, whose facilities of capture are greatly increased by the peculiar habits of the species.

Thick underwood, abounding in brambles and long grass, is the favourite resort of the Pheasant, and here it lies concealed during the day, its times for feeding in the adjoining fields being at the dawning, and at sunset. In its progress to the feeding-ground it always runs, and, on this account, is very easily taken by wire-snares set in the narrow paths that it makes through the long grass, and which it constantly frequents. Its habit of roosting upon trees is, however, still more fatal to this bird, since, from being an object of

considerable size, readily to be distinguished also by its long tail, and at the same time not easily frightened from its perch, it offers a sure mark during moonlight nights to the gun of the poacher; and it is chiefly from this mode of destruction that such incredible numbers are sent to the London market, in defiance to all the severe enactments of the Game Laws. The roosting-place of the male bird is very easy of observation, for he almost invariably *chuckles* when first he *treks*, or goes to perch; and the female usually utters a faint chirp on the same occasion. During summer and the period of moulting, I have remarked that the Pheasant rarely perches, but retires for the night to the longest grass, and other thick cover, and does not begin to *mount* again until towards the end of September or the beginning of October, having at that period renewed its plumage. Where Pheasants are numerous, the males are in general found associated during the winter, and separate from the females; and it is not until about the end of March that they allow the approach of the latter without exhibiting signs of displeasure, or at least of indifference. At the above-mentioned time, the male bird assumes an altered appearance; the scarlet of his cheeks, and around his eyes, acquires additional depth of colour, and he walks with a more measured step, with his wings let down, and with his tail carried in a more erect position.

Being polygamous, he now takes possession of a certain *beat*, from whence he drives every male intruder, and commences his crowing, attended with a peculiar clapping of the wings, and which answers as the note of invitation to the other sex, as well as of defiance to his own.

Nest, &c. The female makes a very inartificial nest upon the ground in long grass, or thick underwood, and not unfrequently in fields of clover, and lays from ten to fourteen eggs, of a clear oil-green colour. The young are excluded during the months of June and July, and continue with the hen till they begin to moult, and to assume the adult plumage; which, commencing about the beginning of September, is

perfected by the middle of the following month, and after this period the young males are only to be distinguished from the older birds by the comparative shortness and bluntness of the tarsal spur.

In many of the large *preserves* of Pheasants in the southern counties of England, the breed is supported by great numbers being hatched under domestic fowls, and reared in confinement; then set at liberty as soon as they are fully able to provide for themselves. But, in the northern counties, this mode of replenishing the stock is seldom attempted, as these birds are prepared, by their natural economy, to increase very rapidly, and will do so wherever due attention is paid to their preservation. It would appear, indeed, that the northern parts of the kingdom are particularly suitable to them, as they are making considerable progression, and have, within a comparatively short space of time, spread themselves over the whole county of Northumberland. In this district the ring-necked variety is most prevalent, and has nearly superseded the common kind.

The principal food of the Pheasant in the winter months Food. is grain and seeds, but in spring and summer it lives more upon roots and insects. I have observed that the root of the *Bulbous Crowfoot* (*Ranunculus bulbosus*), a common but acrid meadow plant, is particularly sought after by this bird, and forms a great portion of its food during the months of May and June. The root of the garden tulip is also an article of diet, which it omits no opportunity of obtaining, and which, by means of its bill and feet, it is almost certain to reach, however deep it may be buried.

The Pheasant, like most of the gallinaceous tribe, is very liable (especially in a state of confinement) to the disease called the *Gapes* (provincially, in Northumberland, the *Nax*), so destructive to broods of chickens and young turkeys in particular situations. It is occasioned by an intestinal worm of the genus *Fasciola* (the *Fasciola Trachea* of MONTAGU), which, lodging in the trachea, adheres by a kind of sucker

to its internal membrane, and causes death by suffocation from the inflamed state of the part. Many recipes for the cure of this fatal malady have been suggested, but none of them seem to be effectual except the one recommended by MONTAGU,* viz. fumigation by tobacco, found to be an infallible specific when administered with due care and attention.

In the wild state, as well as under confinement, the female Pheasant is frequently subject to that singular *lusus naturæ*, the acquisition of a plumage resembling that of the male bird; the cause of which change, it should appear from the investigations hitherto made, may be attributed to the advanced age of the individual, or, in younger birds, to some derangement of the generative organs; as the birds which have experienced this change in a confined state have ever afterwards proved barren.* The same phenomenon occurs in the Pea-hen, and the common domestic fowl, and probably, on further inquiry, the same tendency will be found prevailing, not only in birds of this order, but in all species, as the natural effect of age, sterility, or other peculiar changes of constitution.

The Pheasant is now found numerously distributed through a great part of Europe; and in its native limits, the empires of Asia, it is very abundant.

PLATE 57. Male and female Pheasants; the latter of the natural size, the former of about three-fifth parts.

General description.
Male.

Bill pale wine-yellow. Irides pale brownish-orange.

Cheeks naked, papillose, of the brightest scarlet-red,

* See Supplement to Ornith. Dict. article *Pheasant*, where will be found some interesting particulars respecting this disease, and also the change of plumage to which the females of the gallinaceous order are subject.

+ A very interesting paper on the change of plumage in hen birds, by JOHN BUTTER, Esq. F. L. S., M. W. S., is to be found in the 3d vol. of the Memoirs of the Wernerian Society, to which my readers are referred.

with minute black specks. Crown of the head bronzed green; the feathers rather elongated and silky. On each side of the occiput is a tuft of dark golden-green feathers, that can be erected at pleasure, and are very conspicuous in the pairing season. Upper part of the neck dark green, with purple and violet-blue reflections. Lower part of neck, breast, and flanks, deep reddish-orange, shewing, in some positions, beautiful light purple reflections; the feathers heart-shaped, or cloven towards the tip, bordered and terminated with pansy-purple. Middle of the belly and thighs blackish-brown; in younger birds mixed with reddish-brown. Exterior border of the upper back and scapular feathers deep reddish-orange, glossed with purple; within which is a yellowish-white band; and the centre of each feather black, or spotted with brownish-black. Lower, back, and tail-coverts green, of different shades, intermixed with brownish-orange, tinged with purplish-red; the feathers long, pendent, and of open texture. Tail very long; the feathers rapidly decreasing from the centre to the exterior; their middle part of a wood-brown, with transverse black bands, fringed with reddish-brown, and tinged with purple. Legs and toes greyish-black. Spur upwards of half an inch in length, pointed, and very sharp in adult birds.

General colour of the plumage yellowish-brown, mixed Female.
with different shades of grey, and brown and black.
Cheeks covered with small closely-set feathers. Upper
part of the neck shewing, in some lights, iridescent re-
flections.

Pied and white varieties of the Pheasant are very common.

FAMILY III. TETRAONIDÆ, LEACH.

NEARLY allied to the preceding family follows that of the Tetraonidæ, distinguished by the entire or partial absence of those naked and carunculated appendages that ornament the head and cheeks of the *Phasianidæ*, and by the construction of the hind toe, which becomes gradually shorter and weaker, and is at length entirely lost in such groups as lead immediately to the succeeding family of the *Struthionidæ*. The preceding observations upon the habits of the *Phasianidæ* are in a great degree applicable to the members of the present family. Like them, some species are polygamous, others are in habit of annually pairing. They construct their nests upon the ground, and lay a great number of eggs. Their food consists of grain, seeds, roots, the harder tops of heath and other plants, and of insects. Some of the groups, as the genera *Tetrao*, *Lagopus*, &c. inhabit mountainous regions, braving the inclemency of the severest arctic winters. Others, as the genera *Francolinus*, *Turnix*, *Tinamus*, &c. are natives of the warmer latitudes of both worlds; and the genera *Pterocles*, *Syrrhaptes*, &c. are only found on the sandy and rocky deserts of the African and Asiatic continents.

GENUS TETRAO, LINN. GROUS.

GENERIC CHARACTERS.

BILL short, strong; the upper mandible convex, and arched from the base to the tip. Nostrils basal, and lateral; partly closed by an arched scale, and hidden from view by small closely-set feathers. Eye-brows naked, and adorned with a red papillose and fringed skin. Wings short; the first quill much inferior in length to the second, which is shorter than the third and fourth. Tail of sixteen feathers. Feet

with three toes before, united as far as the first joint; and one toe behind short; the edges of all of them fringed, or furnished with rough prominences. Tarsus feathered to the toes.

The species forming this genus are polygamous, and inhabit the forests of the mountainous and colder regions. They are natives of high northern latitudes, and of the highest mountains of central Europe. They feed upon the seeds of alpine grasses and low shrubs, the tender shoots of pines and firs, birch, &c. Their flesh is generally juicy, and of high flavour.

BLACK GROUS.

TETRAO TETRIX, Linn.

PLATE LVIII. and LVIII *.

- Tetrao Tetrix, *Linn.* Syst. 1. p. 272. 2.—Fau. Suec. No. 202.—*Gmel.* Syst. 1. p. 748.—*Lath.* Ind. Ornith. v. 2. p. 635. 3.
Urogallus minor, Raii Syn. p. 53. A. 2.—*Will.* p. 124. t. 31.—*Briss.* 1. p. 186. 2.
Petit Tetras, ou Coq de Bruyère à queue fourchue, *Buff.* Ois. v. 2. p. 210. t. 6.—*Id.* Pl. Enl. 172. and 175.
Tetras Berkhan, *Temm.* Pig. et Gall. v. 3. p. 140.—*Id.* Man. d'Ornith. v. 1. p. 461.
Gabel Schwanziges Waldhuhn, *Bechst.* Naturg. Deut. v. 3. p. 1319.—*Meyer,* Tasschenb. Deut. v. 1. p. 295.—*Frisch,* Vög. t. 109. male.—Sup. No. 109. female.
Black Grous, Black Cock, Black Game, *Br. Zool.* 1. No. 93. t. 42.—*Arct. Zool.* 2. No. 314. C.—*Will.* (Ang.) p. 173. t. 31.—*Lath.* Syn. 4. p. 733. 3.—*Id.* Sup. p. 213.—*Albin.* 1. t. 22.—*Lewin's Br. Birds,* 4. t. 133.—*Mont. Ornith. Dict.*—*Id.* Sup.—*Pult. Cat. Dorset.* p. 7.—*Wale.* Syn. 2. t. 181.—*Don,* Br. Birds, 4. t. 97.—*Bewick's Br. Birds.*

PROVINCIAL—Heath-Cock, Heath-Poult.

THE extirpation of that noble bird the Capercail *, or Cock of the Wood (*Tetrao Urogallus*), which formerly in-

* The last individual of this species in Scotland was killed, about forty years ago, near Inverness; previous to which date the breed had become extinct in Ireland.

habited the forests and mountainous districts of Scotland and Ireland, has placed the Black Grous at the head of this genus in the British Fauna. The present species is now confined, in the southern parts of England, to a few of the wildest uncultivated tracts, such as the New Forest in Hampshire, Dartmoor and Sedgemoor in Devonshire, and the heaths of Somersetshire. It is also sparingly met with in Staffordshire, and in parts of North Wales, where it is under strict preservation. In Northumberland it is very abundant, and has been rapidly increasing for some years past, which may be partly attributed to the numerous plantations that, within that period, have acquired considerable growth in the higher parts of the county, as supplying it both with food and protection. It abounds throughout the Highlands of Scotland, and is also found in some of the Hebrides.—The bases of the hills in heathy and mountainous districts, which are covered with a natural growth of birch, alder, and willow, and intersceted by morasses, clothed with long and coarse herbage, as well as the deep and wooded glens so frequently occurring in such extensive wastes, are the situations best suited to the habits of these birds, and most favourable to their increase. During the months of autumn and winter, the males associate, and live in flocks, but separate in March or April ; and, being polygamous, each individual chooses some particular station, from whence he drives all intruders, and, for the possession of which, when they are numerous, desperate contests often take place. At this station he continues early every morning and in the evening during the pairing season, repeating his call of invitation to the other sex, and displaying a variety of attitudes, not unlike those of a Turkey Cock ; accompanied by a crowing note, and by another similar to the noise made by the whetting of a scythe. At this season his plumage exhibits the richest glosses, and the red skin of his eye-brows assumes a superior intensity of colour. With the cause that urged their temporary separation, their animosity ceases, and the male birds again associate, and live harmoniously together.

The female deposits her eggs in May; they are from six Nest, &c. to ten in number, of a yellowish-grey colour, blotched with reddish-brown. The nest is of most artless construction, being composed of a few dried stems of grass placed on the ground, under the shelter of a tall tuft or low bush; and generally in marshy spots, where long and coarse grasses abound. The young of both sexes at first resemble each other, and their plumage is that of the hen, with whom they continue till the autumnal moult takes place; at this time the males acquire the garb of the adult bird, and, quitting their female parent, join the societies of their own sex.—The food Food. of the Black Grous, during the summer, chiefly consists of the seeds of some species of *Juncus*, the tender shoots of heath, and insects. In autumn, the crowberry, or *Craigcrook* (*Empetrum nigrum*), the cranberry (*Vaccinium oxy-coccus*), the whortleberry (*Vaccinium vitis-idaea*), and the trailing arbutus (*Arbutus uva-ursi*), afford it a plentiful subsistence. In winter, and during severe and snowy weather, it eats the tops and buds of the birch and elder, as well as the embryo shoots of the fir tribe, which it is well enabled to obtain, as it is capable of perching upon trees without any difficulty. At this season of the year, in situations where arable land is interspersed with the wild tracts it inhabits, descending into the stubble grounds, it feeds upon grain.

In the adult state, the Black Grous displays great shyness of character, and, after the autumnal moult, is not easily approached within gunshot. Frequent attempts have been made to domesticate this bird, but without success; and, through all the trials that have taken place, it has never been known to breed in confinement. It seems to be a species more widely dispersed throughout the central parts of Europe than any of the rest, and is found tolerably abundant in Germany, France, and Holland. In the more northern countries, Denmark and Sweden, Norway and Russia, it is very common.

The flesh of this bird is sweet and well favoured, not of so

deep a colour as that of the Red Grous, and the internal pectoral muscle, which is remarkably white, is esteemed the most delicate part.

PLATE 58. Male bird of the natural size.

General description.
Male.

Bill black. Head, neck, breast, back, and rump, black, with blue and purple reflections. Belly, wing-coverts, and tail, pitch-black. Secondary quills tipped with white, and forming, with the adjoining coverts, a band across each wing. Under tail-coverts pure white. Eyebrows naked, vermillion-red. Legs clothed with blackish-grey feathers to the toes; which last are furnished with lateral fringed appendages.

PLATE 58 *. The female. Natural size.

Female.

Head and neck ochreous-yellow, rayed with black. Upper parts orange-brown, barred and speckled with black. Greater wing-coverts tipped with white. Breast pale-orange or chestnut-brown, barred with black. Belly greyish-white, barred with black and brown. Under tail-coverts white, rayed with black. Tail slightly forked, orange-brown, spotted with black; the tip greyish-white.

The young, until the autumnal moult, resemble the female.

GENUS LAGOPUS, VIEILL. GROUS-PTARMIGAN.

GENERIC CHARACTERS.

BILL very short, clothed at the base with feathers; the upper mandible convex, and bent down at the point. Nostribs basal, lateral, partly closed by an arched membrane, and nearly hidden by the small closely-set feathers at the base of the bill. Eyebrows naked, as in genus *Tetrao*. Wings short, concave, with the third and fourth feathers the

longest. Tail generally square at the end. Tarsi and toes completely feathered; hind toe very short, and barely touching the ground with the tip of the nail. Nails long, and nearly strait.

The members of this genus (separated by VIEILLOT from the preceding), are principally distinguished, partly by having the tarsi and toes entirely clothed with hairy feathers, and the sides of their toes without fringes or pectinations; the hind toe is also shorter, consisting of little more than a nail, which barely touches the ground. They also differ in their habits, and affect the more exposed parts of the regions where they dwell. They are natives of the colder climates, and are found in very high latitudes within the arctic circle. Their food is composed of the young shoots of heath, the seeds of various grasses, and the several fruits of *Empetrum nigrum*, *Vaccinium vitis-idaea*, *Arbutus alpina*, and other similar plants. The birds of this genus are all subject to a double moult.

RED GROUS-PTARMIGAN.

TETRAO SCOTICUS, Lath.

PLATE LIX. FIG. 1.

- Tetrao Scoticus, *Lath.* Ind. Ornith. v. 2. p. 641. sp. 15.
 Bonasa Scotica, *Briss.* l. p. 199. 5. t. 22. f. 1.
Tetrao Lagopus, var. γ and 8. *Gmel.* Syst. l. p. 750.
Poule de Marais Grous, *Cuv.* Reg. Anim. v. 1. p. 450.
Tetras rouge, *Temm.* Mad. d'Ornith. v. 1. p. 450.
Tetrao Saliceti, æstate, *Temm.* Man. d'Ornith. 1st ed. only.
Tetras des Saules, *Temm.* Pig. et Gall. v. 3. pl. 9. f. 5.
 Red Game, Moor-Cock, Gor-Cock, *Raii* Syn. p. 54. A. 3.—*Will.* (Ang.) p. 177.—*Albin.* l. t. 23. 24.
 Red Grouse, *Br. Zool.* l. No. 94. t. 43.—*Lath.* Syn. 4. p. 746. 13.—*Id. Sup.* p. 216.—*Lewin's Br. Birds*, t. 135.—*Mont. Ornith. Dict.*—*Id. Sup.*—*Walc.* Syn. 2. t. 183.—*Bewick's Br. Birds*, l. p. t. 301.—*Low's Faun. Orcad.* p. 51.

THIS beautiful species, so exclusively British, (as its geographical distribution has not been hitherto found to extend

beyond the limits of these islands), is plentiful in the elevated heathy parts of the northern counties of England, and very abundant on those wild wastes that occupy so large a share of the Highlands of Scotland. It is also scantily met with in the mountainous districts of South Wales, and inhabits the moors and bogs of Ireland.—Tracts strictly heathy are the situations peculiarly favourable to the nature of this bird; for it neither affects the lower, more swampy, and grassy places frequented by the Black Grouse, nor does it resort to the high stony regions that are the appropriate locality of the Common Ptarmigan.

It is monogamous, pairing every spring, and this at a very early period, usually during the month of January, but sometimes, in very mild seasons, even previous to that time. The female begins to lay in March or April, placing her nest

Nest, &c. upon the ground in a tuft of heath. The nest (scarcely deserving that appellation) consists but of a few withered stems of heath and grass, that line the shallow cavity wherein the eggs are deposited. These are from eight to twelve in number, of a greyish-white, blotched with umber-brown. The female only performs the office of incubation; the male bird, however, remaining in the immediate neighbourhood of the nest, and joining the brood as soon as they are excluded; after which he is as assiduous in his attention to them as the female parent. The whole continue united till the great law of nature prompts them, on the return of spring, to separate and pair. Where they are very numerous, Grous often congregate in large *packs* during the latter part of autumn, and through the winter; and when thus associated become very wild, not easily to be approached by the gun within

Food. killing distance.—The food of this species consists of the tender tops of the heaths, the fruit of the crowberry, trailing arbutus, and cranberry; and I have found them occasionally upon the oat stubbles, where arable land has happened to approach the boundary of their heathy haunts. In the Highlands of Scotland during the months of August and September, the slaughter of the Red Grouse is immense; but

the great care bestowed upon their protection through the rest of the year, and the comparatively small number requisite to replenish the stock, owing to the numerous broods derived from each pair, is at present a sufficient guarantee against the final extinction of a species, which, as the peculiar property of our islands, should be most carefully continued.

The Red Grouse is more easily tamed and kept in confinement than the Black Grouse, and has been known to breed in that state *. They feed readily upon oats, meal, &c. but thrive better when frequently supplied with tufts of heath.

Varieties of a cream colour, or with different degrees of white, are often met with ; and there has for many years existed, upon the moors of Blanchland, in the county of Durham, a cream-coloured or light-grey variety, spotted more or less with dark brown and black ; but from the anxiety of sportsmen to procure specimens, these birds have not been allowed to increase, as they otherwise, in all probability, would have done.

PLATE 59. Fig. I. Male bird. Natural size.

Bill black ; half hidden by the small feathers that cover the nostrils. Above the eyes is a naked fringed skin of a bright scarlet colour. Irides chestnut-brown. Orbita of the eyes, and a small patch at the posterior angles of the lower mandible, white. Head, neck, breast, and belly, deep chestnut-brown ; in many instances marked with fine undulating black lines, and frequently spotted with white. Back and wing-coverts reddish or chestnut-brown, with variously sized black spots. Tail having the four middle feathers reddish-brown, with transverse black lines ; the rest entirely brownish-black. Legs and toes thickly clothed with greyish-white feathers. Claws long and flat, their colour yellowish-grey.

General description.

* See MONT. Supp. to Ornith. Dict. art. *Red Grouse*.

The female varies from the male bird in having the brown of a lighter tint, and more varied with ochreous-yellow, and yellowish-white.

COMMON PTARMIGAN.

LAGOPUS MUTUS, Leach.

PLATE LIX. FIGS. 2, AND LXIX *.

- Tetrao Lagopus, *Linn. Syst.* 1. p. 274. 4.—Faun. Suec. No. 203.—*Gmel. Syst.* 1. p. 749.—*Raii Syn.* p. 55. 5.—*Will. p. 127.*—*Briss. 1. p. 216. 12.* Le Lagopéde, *Buff. Ois.* v. 9. p. 264. t. 9.—*Id. Pl. Enl.* 129. female in winter plumage, and *Pl. 494.* female assuming the summer plumage. L'Attages blanc, *Buff. Ois.* v. 2. p. 262. Tetras Ptarmigan, *Temm. Man. d'Ornith.* v. 2. p. 468.—*Id. Pig. et Gall.* v. 3. p. 185. t. anat. 10. f. 1. 2. and 3. Haassenfüssige Waldhuhn, *Bechst. Naturg. Deut.* v. 3. p. 1347.—*Meyer, Tasschenb. Deut.* v. 1. p. 298.—*Id. Vög. Deut.* v. 2. t. Heft. 19. winter and summer plumage. Ptarmigan, *Br. Zool.* 1. No. 95. t. 43.—*Arct. Zool.* 2. p. 315. D.—*Lewin's Br. Birds,* 4. t. 134.—*Lath. Syn.* 4. p. 741. 10.—*Walc. Syn.* 2. t. 182.—*Mont. Ornith. Dict.*—*Id. Supp.*—*Don. Br. Birds,* 1. t. 12. White Grouse, *Bewick's Br. Birds,* 1. p. t. 303. old male.

ACCORDING TO PENNANT and earlier writers, this species seems, at one period, to have inhabited some of the mountainous ridges of Cumberland and Westmoreland.—It is now, however, totally extinct in England, and is only found in the Highlands of Scotland and its isles. It lives on the highest mountains, particularly those of which the summits are covered with fragments of rock; and, by resembling these (amongst which it is always found) so closely in colour, it is enabled to escape its numerous inferior enemies, and even, in a great degree, to escape the piercing eye of the Eagle. It is not of the shy nature that characterises the Red Grouse, but will permit of a near approach; indeed, so unwary is it, as frequently to be knocked down with a stick by the shepherds. Eggs.—It pairs early in spring, and the female lays her eggs upon the bare ground amongst the stones. They are in number from eight to fourteen or fifteen, of an oblong form, larger

than those of a Partridge, and of a greenish-white colour, speckled and blotched with brown and brownish-black. The brood not only continue together till the succeeding spring, but in winter several families associate, forming small flocks ; and at this season they burrow in the snow, under which they find a warm and secure habitation, and are thus enabled, by pursuing the surface of the earth, to obtain a sufficient supply of food during our most severe winters.—Alpine berries, such as those of the *craecrook*, cranberry, and cloudberry or *knoop* (*Rubus chamæmorus*), with the seeds and tender shoots of alpine plants, form their food.

Food.

The flesh of the Ptarmigan is rather drier than that of the Red Grouse, and not so highly flavoured ; the latter being considered for the table superior to any other of our feathered game.

This species has been reared in confinement without much difficulty, and has been known to breed in a tame state. It is widely spread, being found in all the alpine districts of central Europe ; and in the more northern latitudes it is very abundant. The Common Ptarmigan of North America does not appear to differ in any respect from the European.

The common call or alarm note of the Ptarmigan is not unlike that of the missel-thrush, but rather harsher in sound.

PLATE 59. Fig. 2. A male in the winter plumage, and of the natural size.

A streak past the eye, lateral tail-feathers, and shafts of the quills black ; the rest of the plumage pure white.

General description.
Winter plumage.

Above the eyes is a scarlet fringed membrane. Irides yellowish-brown. Bill and claws black.

The female in winter plumage differs from the male in being without the black streak before and behind the eye, and also in wanting the red fringed membrane.

PLATE 59*. Ptarmigans in spring and summer plumage.
Natural size.

Spring and
summer
plumage.

In spring the plumage becomes varied on the upper and under parts with black and deep ochreous yellow ; but the quills, through all its changes, remain white, and their shafts invariably black. Towards autumn the ochreous-yellow gives place* to a greyish-white ; and the black spots (which in the spring are large and distinct) become broken, and assume the appearance of zig-zag lines, and specks. These again, as the season advances, give place to the pure immaculate plumage, which distinguishes both sexes during the winter.

GENUS PERDIX, *LATH.* PARTRIDGE.

GENERIC CHARACTERS.

Bill short, strong, naked at the base ; upper mandible convex, with the point bending considerably downwards. Nostribs basal, and lateral ; pierced in a large membrane, and partly concealed by an arched naked scale. Wings short, and concave ; the three first quills shorter than the fourth and fifth, which are the longest. Tail of fourteen or eighteen feathers, short, and generally bending towards the ground. Feet with three toes before, united by a membrane as far as the first articulation, and with one hind-toe. Tarsus, in the male bird, frequently furnished with one, or more than one, spur or tubercle.

This genus was first established by LATHAM, who very

* Mr Ross, gunsmith in Edinburgh, (who, as a preserver of animals, has had hundreds of Ptarmigans through his hands, and at all seasons of the year) assures me, that he never met with an individual that had not young (or imperfect) feathers on some part of the body. This fact would imply, that the moulting of the Ptarmigan (and perhaps of other alpine birds, or such as live in high latitudes) is different from the usual course, in being constant and progressive, instead of the plumage undergoing a total change at a particular season. May not this be a wise provision, that such birds shall not be too much exposed at any given time, as would be the result of an entire renewal of plumage ?

properly separated the different species that compose it from the genus *Tetrao*, in which it had been left by LINNÆUS, GMELIN, and others. Most of the species are natives of the temperate and warmer climates, and in some countries they are sedentary, in others regularly migratory. Most of the birds of this genus pair, and the male assists his mate in the care and protection of the brood, which continue united till the following spring. They inhabit cultivated countries, feeding upon grain, seeds, bulbous roots, and insects. Their moult is simple, but the males may generally be distinguished by a superior richness of plumage.

In the British Fauna, we reckon but two species of this genus, the Common or Cinereous Partridge, belonging to TEMMINCK's second section; and the Common Quail, included in the fourth.

COMMON PARTRIDGE.

PERDIX CINEREA, Lath.

PLATE LXI.

- Perdix cinerea, *Lath.* Ind. Ornith. v. 2. p. 645. sp. 9.
Tetrao Perdix, *Linn.* Syst. 1. p. 276. 13.—*Faun. Suec.* No. 205.—*Gmel.* Syst. 1. p. 757. sp. 13.
Perdix cinerea, *Raii* Syn. 57. A. 2.—*Will.* 118. t. 28.—*Briss.* 1. 219. 1.
Perdix montana, *Lath.* Ind. Ornith. v. 2. p. 646. sp. 11.
Tetrao montanus, *Gmel.* Syst. p. 788. sp. 33.
Perdix Damascena, *Lath.* Ind. Ornith. v. 2. p. 646. sp. 10. } Local varieties.
Tetrao Damascena, *Gmel.* Syst. p. 758.
La Perdrix Grise, *Buff.* Ois. v. 2. p. 401.—*Id.* Pl. Enl. 27. female.—*Temm.* Pig. et Gall. v. 3. p. 378.—*Id.* Man. d'Ornith. v. 2. p. 488.
La Petite Perdrix, *Buff.* Ois. v. 2. p. 417.
Perdrix de Montagne, *Buff.* Ois. v. 2. p. 419—*Id.* Pl. Enl. 136. a local variety.
Gemeines oder Graues Feldhuhn. *Bechst.* Naturg. Deut. v. 3. p. 1361.—*Meyer*, Tasschenb. Deut. v. 1. p. 303.—*Frisch.* Vög. t. 114. male, t. 114. B. red variety, and t. 115. white or cream-coloured variety.
Common Partridge, Br. Zool. 1. No. 96.—Arct. Zool. 2. p. 319. A.—*Will.* Angl. p. 166. t. 28.—*Albin.* 1. t. 27.—*Lath.* Syn. 4. p. 762. 8.—*Mont.* Ornith. Dict.—*Id.* Supp.—*Lewin's Br. Birds*, 4. t. 136.—*Walc.* Syn. 2. t. 184.—*Pult. Cat. Dorset.* 7.—*Bewick's Br. Birds*, 1. p. t. 305.
Damascus Partridge, *Lath.* Syn. v. 4. p. 764. 9. } Local varieties.
Mountain Partridge, *Lath.* Syn. v. 4. p. 765. 10. } varieties.

THIS well-known species of game is abundant throughout the kingdom, except in some of the mountainous and moory wastes in the northern counties of England, and in the Highlands of Scotland, the peculiar localities of the preceding genus.—Districts well interspersed with arable land are the most favourable to the habits and economy of the Partridge; thus, an extended cultivation, which has rendered many of our British birds comparatively rare, and has caused indeed the extinction or banishment of some, has tended greatly to its increase; and we accordingly find the species most plentiful, where agriculture has received the greatest encouragement, and attained the highest perfection. The Partridge begins to pair in February, and at this season obstinate contests occur between the males for the possession of the other sex. The female seldom produces her eggs before the latter part of May, and the greater portion of the young break the shell about the middle of July.

Eggs.

The eggs are deposited on the ground in a shallow hole scratched for the purpose, and under cover of a tuft of grass, whin-bush, or other brush-wood; and not unfrequently in fields of clover, or amongst standing corn. They amount to from twelve to twenty, of a pale wood-brown colour.

Incubation, which occupies three weeks, is performed solely by the female, who sits very closely, and is with difficulty driven from her eggs. MONTAGU mentions an instance, in which a Partridge, on the point of hatching, was taken, together with her eggs, and carried in a hat to some distance; she continued to sit, and brought out her young in confinement. Several other parallel cases are related, and some not very dissimilar have come under my own observation. As soon as the young are excluded, the male bird joins the covey, and displays equal anxiety with the female for their support and defence. There can be few persons conversant with country affairs who have not witnessed the confusion produced in a brood of young Partridges by any sudden alarm; or who have not admired the stratagems to which the parent

birds have recourse, in order to deceive, and draw off the intruder. Their parental instinct, indeed, is not always confined to mere devices for engaging attention ; but where there exists a probability of success, they will fight obstinately for the preservation of their young, as appears from many instances already narrated by different writers, and to which the following may be added, for the truth of which I can vouch. A person engaged in a field, not far from my residence, had his attention arrested by some objects on the ground, which, upon approaching, he found to be two Partridges, a male and female, engaged in battle with a Carrion-Crow ; so successful and so absorbed were they in the issue of the contest, that they actually held the Crow, till it was seized, and taken from them by the spectator of the scene. Upon search, the young birds (very lately hatched) were found concealed amongst the grass. It would appear, therefore, that the Crow, a mortal enemy to all kinds of young game, in attempting to carry off one of these, had been attacked by the parent birds, and with the above singular success.

By a careful attention to diet, Partridges may be easily reared in confinement, and become very tame*, but they have never been known to breed in this state. In some parts of England great numbers are annually hatched under domestic fowls, and brought up by hand ; which are afterwards set at liberty, to increase the stock upon preserved grounds. In the above process the *gapes* has been found very fatal, but since the discovery of a specific† for this distemper, the loss from such a cause may be easily prevented.

The Partridge is found to vary considerably in size, according to situation, and the different nutritive qualities of food ; thus, the largest are met with in districts where an abundance of grain prevails, whilst, upon the precincts

* See MONTAGU's Supplement to Ornith. Dict. article *Partridge*.

† See preceding account of the Pheasant.

of moors, where but an inconsiderable portion of arable land is offered to them, they are much inferior in size, although perhaps by no means evincing a similar inferiority in point of flavour. The feeding time of these birds (as of all the other members of the Gallinaceous order, in a wild state) occupies two or three hours after sunrise, and again before sunset. During the middle of the day, they retire to bushes, or bask in the sun on the dry banks of hedges, and are busily engaged in dusting, and afterwards in preening their feathers. They roost upon the ground, generally about the middle of a field, chusing a part very scanty in herbage, or other cover likely to draw the attention of night-feeding animals of prey ; and the whole covey sit closely crowded together. They go to rest (or *jug*, as it is frequently termed) a little after sunset, previous to which they may be heard calling and answering each other, after having been separated in feeding, or by any accidental cause.

This species is found throughout the greater part of Europe, but is most abundant in the temperate and northern parts.—It also visits Egypt and the coast of Barbary, being migratory in some countries.

PLATE 61. Male and female. Natural size.

General description.
Male.

Bill pale bluish-grey. Irides brown. Behind the eye is a naked red papillose skin. Cheeks, throat, and eye-brows pale brownish-orange. Neck and breast bluish-grey, with fine zig-zag black lines. On the belly is a large patch of deep reddish-brown, in the shape of a horseshoe. Flanks grey; the feathers banded with pale orange-brown. Back, wings, rump, and upper tail-coverts brown, with transverse black lines and spots. The scapulars and wing-coverts have the shafts of the feathers yellowish-white, edged with black. Quills blackish-grey, with brown bars. Tail reddish-orange. Legs and toes bluish-grey.

Female. The female differs from the male bird in having less of the

brownish-orange upon the head and throat. The feathers upon the crown of the head are also edged with white; and the upper parts of the plumage have more black spots and bars. The orange-brown mark upon the belly is also generally ill-defined, paler in colour, or entirely wanting.

White, pied, and cream-coloured varieties are not uncommon.

COMMON QUAIL.

PERDIX COTURNIX, Linn.

PLATE LXII.

Perdix Coturnix, Lath. Ind. Ornith. v. 2. p. 651. sp. 28.

Tetrao Coturnix, Linn. Syst. 1. p. 278. 20.—Faun. Suec. No. 206.—*Gmel.* Syst. 1. p. 765.—*Raii* Syn. p. 58. A. 6.—*Will.* p. 121. t. 29.—*Briss.* v. 1. p. 247.

Coturnix major, Briss. v. 1. p. 251.

La Caille, Buff. Ois. v. 2. p. 449. t. 16.—*Id. Pl. Enl.* 170.—*Temm.* Pig. et Gall. v. 3. p. 478.—*Id. Man. d'Ornith.* v. 2. p. 491.

Le Crokiel, Buff. Ois. v. 2. p. 255.

Wachtel Feldhuhn, Bechst. Naturg. Deut. v. 3. p. 1402.—*Meyer, Tasschenb.* Deut. v. 1. p. 306.—*Frisch, Vög.* t. 117. male and female.

De Wachtel, Sepp. Nederl. Vög. t. p. 143.

Common Quail, Br. Zool. 1. No. 99.—*Arct. Zool.* 2. p. 320. B.—*Albin.* 1. t. 30.—*Will. (Angl.)* p. 169.—*Lewin's Br. Birds,* 4. t. 138.—*Lath. Syn.* 4. p. 779. 24.—*Id. Supp.* p. 222.—*Mont. Ornith. Dict.* v. 2.—*Id. Supp.—Walc. Syn.* 2. t. 185.—*Pult. Cat. Dorset.* p. 7.—*Bewick's Br. Birds,* 1. p. t. 308. male.

THE Quail, which is found in most parts of the Old Continent, is a migratory species, changing its abode at fixed periods, and obeying in that respect the same laws that regulate the movements of so many of the feathered race. In Britain ^{Periodical Visitant.} these birds make their first appearance in May, and continue with us till after the breeding-season, and till their young are able to accompany them in their autumnal migration to more southern latitudes, which usually takes place during the month of October. Some few are said to remain through the whole year in the southern counties, and in the vicinity of the sea;

but these probably (as suggested by MONTAGU) are individuals of a later brood, who have been unable to accompany the main body at the time of their departure. During their abode in this country, they inhabit the champaign and well-cultivated districts; but they now visit us in much fewer numbers than they formerly did, and their appearance in the midland and northern counties of England, has of late years been a rare occurrence. They are polygamous; and on their first arrival, the males are readily discovered by the whistling call-note they utter, and which is repeated thrice successively, after short intermissions.

Nest, &c. The female makes scarcely any nest, depositing her eggs upon the ground in a very shallow receptacle, scratched for the occasion, and generally in fields of green wheat.—They vary in number from six to twelve or fourteen in this country, but are said frequently to amount, on the Continent, to eighteen or twenty.—Their colour also fluctuates from a leek to a bluish and an oil green, sometimes marked with large blackish-brown blotches; at other times with very small specks of that colour.

Quails are very abundant on the Continent during the summer, but migrate in autumn to the warmer latitudes of Asia and Africa. Portugal is the only exception; in which country they are met with throughout the year, but more numerously in winter than in summer; and from which fact it would appear, that this particular situation answers as a winter retreat to some of the birds that are bred in the more northern provinces of Europe. During their periodical flights between Europe and Africa, they visit the islands of the Archipelago, and the shores of Italy and Sicily (upon which they alight for rest) in myriads. The quantity sometimes killed under these circumstances is astonishing, as may be judged from the record of one hundred thousand having been destroyed in one day on the coasts of the kingdom of Naples*. In Sicily their autumnal arrival is anxiously ex-

* See MONTAGU's Ornith. Dict. and Suppl. art. *Quail*.

pected, and the inhabitants are represented as taking particular delight in the sport of shooting them ; the shores being at this particular time lined with people carrying fowling-pieces, and the strait covered with boats similarly filled, all eagerly watching for the arrival of their spoil. In France great numbers are taken alive by means of a call made to imitate their whistle, and which entices them under a net ; but by this device males only are taken, thus accounting for the few female specimens to be found amongst the many hundreds kept in confinement by the London poulters, and which are received from France.

Quails are naturally very pugnaceous, and will fight with determined resolution in the manner of our game cocks ; they were kept for this express purpose by the Greeks and Romans, who delighted in the amusement ; and the fighting of quails still continues to be a favourite pastime with the Chinese.—These birds feed on grain, and seeds of various kinds ; Food. as well as upon insects and worms. In confinement they are principally fed with hemp-seed, upon which diet they soon become loaded with fat, and are esteemed delicious eating.

PLATE 62. Natural size.

Bill blackish-grey. Crown of the head, occiput, and nape of the neck, black ; the feathers margined with chestnut-brown. Down the middle of the head and neck is a cream-yellow streak. Over each eye, and proceeding down the neck, is a white streak. Space between the bill and eyes and ear-coverts pale chestnut-brown. Chin and throat, and streaks turning upwards towards the ear-coverts, chestnut-brown, mixed with blackish-brown ; the rest of the neck and cheeks white. Back, scapulars, and wing-coverts, black ; the feathers margined and varied with brown ; and each having its shaft and central parts sienna-yellow. Breast and belly pale buff-orange ; the shafts and margins of the feathers yellowish-white. Flanks having the feathers similar in disposition of co-

General
descrip-
tion.
Male.

lours to those of the back. Tail blackish-brown; with the shafts, tips, and bars, cream-yellow. Legs and toes pale yellowish-brown.

The female differs in not having any black or brown on the neck and throat. Her breast is spotted with blackish-brown; and the general tints of her plumage are paler.

FAMILY IV. STRUTHIONIDÆ, *VIG.*

THE passage from the preceding to the Struthionidæ, the fourth family of the order, is (as I have before observed, when speaking of the present *Order*,) effected by certain species of the *Tetraonidæ*, where the bill acquires the depressed form and shape of that of the American *Rhea* and the *Emeus* of Australia, and where the feet, if not tridactyle, exhibit at least great weakness and deficiency in the structure of the hind toe. In the present family, the typical groups attain a height and bulk far surpassing the rest of the feathered race; but having wings so short and imperfectly developed as to be totally unfit for the purposes of flight. Their anatomy also exhibits a corresponding variation, the *os furcatorius* being wanting, and the sternum itself destitute of the keel, and presenting the appearance of a flat plate, or buckler. Nearly allied to them, but possessing the power of flight, ranks the genus *Otis*, by certain species of which the immediate passage to the order *Grallatores* is effected. The birds of this family are inhabitants of the plains, and frequently of sandy deserts, feeding upon herbs, grain, and insects. They all run with great swiftness and for a long continuance, and which appears to be their usual mode of progress. Such of the family as are capable of flight, when in this action, stretch out their legs behind them. In disposition they are shy, savage, and stupid.

They are polygamous. In Britain we only possess two species, both belonging to the genus *Otis*.

GENUS OTIS, LINN. BUSTARD.

GENERIC CHARACTERS.

BILL of mean length, nearly straight, compressed, or depressed at the base, and having the point of the upper mandible curved. Nostrils removed from the base; lateral, oval, and open. Legs long, naked above the knee. Tarsus reticulated. Toes three, all forward, short, united at the base, and bordered with membranes. Wings of mean length; the third quill-feather the longest in each wing.

The heavy form of the Bustards, and the shape of the bill, approximate them to the true Gallinaceous birds; but their long and naked legs, and the appearance and flavour of their flesh, also bring them near to the order Grallatores.

They inhabit open countries, living amongst the grass, corn, or low brushwood. Their food is herbage, grain, and insects. They run swiftly, and fly but seldom. They are polygamous; and the females, after fecundation, separate from the males. Their moult is double, and the males of this genus are distinguished from the other sex by a brighter and more varied plumage, or by the accession of extraordinary ornaments.

GREAT BUSTARD.

Otis Tarda, Linn.

PLATE LXIV.

Otis Tarda, Linn. Syst. I. p. 264. 1.—*Gmel.* Syst. I. p. 722. sp. 1.—*Lath.* Ind. Ornith. v. 2. p. 658. sp. 1.—*Raii* Syn. p. 58. A. 1.—*Will.* p. 129. t. 32.—*Briss.* 5. p. 18. 1.

L'Outarde, Buff. Ois. v. 2. p. 1. t. 1.—*Id. Pl. Enl.* 245. male.

Outarde barbue, Temm. Man. d'Ornith. v. 2. p. 506.

Der Grosse Trappe, Bechst. Naturg. Deut. v. 3. p. 1432.—*Meyer,* Tasschenb. Deut. v. 1. p. 308.—*Frisch,* Vög. t. 106. female, and No. 106. Sup. the male.

Great Bustard, Br. Zool. 1. No. 98. t. 44. male, bad figure.—*Arct. Zool.* 2. No. 186.—*Id. Sup.* p. 63.—*Will.* (Ang.) p. 178. t. 32.—*Lath.* Syn. 4. p. 796.—*Albin,* 3. t. 28, 39.—*Edw.* t. 79, 80.—*Lewin's Br. Birds,* 4. t. 139.—*Mont. Ornith. Dict.*—*Id. Sup.*—*Walc.* Syn. 2. t. 173.—*Pult. Cat. Dorset.* p. 6.—*Bewick's Br. Birds,* 1. p. t. 314. correct figure of male.

THIS fine species, the largest of the British land birds, (having been met with weighing from 28 to 30 lb.) was formerly common in many parts of England; and its range extended at one period even to Scotland, as we learn from HECTOR BOETIUS and Sir ROBERT SIBBALD. Within the last thirty or forty years, however, the increased population of the country, and the consequent extension of agriculture, aided by the growth of luxury (the desire of gratifying which increases as the object becomes difficult of attainment), have so reduced the breed, that it is extinct in many places where it was tolerably plentiful before the above-mentioned period. Its appearance is now, I believe, exclusively confined to some parts of the county of Norfolk, particularly where the enclosures are extensive, and the soil of a dry sandy character. It is to be hoped that protection will there be given to the few that survive, and that no endeavours will be spared to prevent the total extinction of so noble a native bird; although probably, in consequence of the present scarcity of males, and the destruction of the eggs, arising from the improved

practice of hand-hoeing the corn, all endeavours may prove ineffectual.

Upon Salisbury Plain in Wiltshire (where it used formerly to abound), we are told by MONTAGU, that, from the great price obtained for the eggs and young, to hatch and rear in confinement, it had become very rare; and, in the Supplement to his work, published in 1813, he says that not a single Bustard had been seen for two or three years previous to that date, even in their most favourite haunts. As, from the answers to all inquiries on this subject, I am not able to state their reappearance, it must be concluded that the breed is now extinct upon those extensive downs, of which it once formed the appropriate ornament. The Bustard resides in its native haunts through the whole year, frequenting the corn-fields in summer, and being found amongst turnips in the winter season; and, in very severe storms of snow, when the ground may be deeply covered, it is sometimes compelled (in small flocks) to seek for more sheltered situations, or to visit the maritime parts of the country. But these migrations too often prove fatal, so large an object soon attracting attention; and it rarely escapes from the number of its pursuers.

The female deposits two eggs upon the bare ground (occasionally amongst clover, but more frequently in corn-fields) early in spring; which rather exceed those of a turkey in size, and their colour is a yellowish-brown, inclining to olive-green, with slight darker variations. Incubation lasts four weeks, and the young, as soon as excluded, follow their parent, but are incapable of flight for a long time.—The Bustard lives chiefly upon the various grasses, trefoils, &c.; it will also feed on seeds and grain, and is particularly fond of green corn and the tops of turnips, which last constitute its chief winter's supply. It also eats worms, and has been known to devour mice and young birds, which are swallowed whole. The stomach is membranaceous, and able to contain a great quantity of food.

The adult male of this species differs in its anatomical structure from the other sex, in possessing a pouch, situated down the fore part of the neck, capable of holding a considerable supply of water,* and having its entrance under the tongue. This is considered as destined to the provident purpose of securing the bird from the effects of thirst in the exposed and dry situations it inhabits, or for the benefit of the female and young during the breeding season, which takes place at a time when little water is to be found upon their usual places of resort ; but this latter supposition does not carry with it much probability, as the male is never seen in close company with the female bird, except previous to incubation.

It is also supposed to make use of this reservoir as a defence against birds or animals of prey, by ejecting the water, by muscular compression, in the face of the enemy, and thus baffling pursuit. Although in a state of confinement, the Bustard becomes tolerably tame to those who are in the habit of attending it ; yet it displays at all times considerable ferocity towards strangers, and all attempts to continue the breed in that state have been without success. With respect to its habits in the wild state, it is so shy as seldom to be approached within gun-shot ; invariably selecting the centre of the largest inclosure, where it walks slowly about, or stands with the head reposing backwards upon the bare part of its neck, and frequently with one leg drawn up.—Upon being disturbed, so far from running in preference to flight (as has been often described), it rises upon wing with great facility, and flies with much strength and swiftness, usually to another haunt, which will sometimes be at the distance even of six or seven miles. It has also been said, that, in former days, when the species was of common occurrence, it was a practice to run down the young birds (before they were able to fly) with greyhounds, as affording excellent diversion. So

* MONTAGU mentions three or four quarts, which probably may be the utmost allowance ; although other writers say as many as *seven*.

far from this possibility existing with respect to the present remnant of the breed, the young birds, upon being alarmed, constantly squat close to the ground, in the same manner as the young of the Lapwing, Golden Plover, &c., and in that position are frequently taken by hand; indeed, this is even the habit of the female during the time of incubation.

The flesh of the Bustard is dark in colour, short in fibre, but sweet and well-flavoured, and is held in high estimation; on which account, and its rarity, this bird has always brought exorbitant prices.

Upon the Continent, it is found in some provinces of France and in parts of Germany and Italy. It is common in Russia, and on the extensive plains of Tartary. According to TEMMINCK, it is rare in Holland.

PLATE 64. A male bird, about one-sixth of the natural size.

The specimen from which the figure is taken was shot, about six years ago, by the Reverend ROBERT HAMOND of Swaffham, in the county of Norfolk, and is now in his possession, as well as two females, and a young bird of a month old. When killed, it weighed twenty-eight pounds, and is a particularly fine specimen, being a full-grown bird. The figure represents the attitude that the bird assumes previous to flight; or for a short time after alighting, when its habit is that of not immediately closing the wings.

Bill strong, greyish-white; the under mandible palest. General description.
Head, nape of the neck, and ear-coverts, bluish-grey. Male.
A streak of black passes along the crown of the head, reaching to the occiput. Chin-feathers and moustaches composed of long wiry feathers, with the barbs disunited and short. Fore part of the neck clothed with a naked bluish-black skin, extending upwards towards the ear-coverts, and covering the gular pouch. Sides of the neck white, tinged with grey; lower part of the neck fine reddish-orange. At the setting on of the neck, or

between the shoulders, is a space destitute of feathers, but covered with a soft grey down. Scapulars buff-orange, barred and spotted with black. Back, rump, and tail-coverts reddish-orange, barred and variegated with black. Lesser wing-coverts fine buff-orange, barred with black. Greater coverts, and some of the secondaries bluish-grey, passing towards the tips into greyish-white. Quills brownish-black, with their shafts white. Tail-feathers white at their bases, passing towards the middle into brownish-orange, with one or two black bars; the tips often white, and, when the feathers are spread laterally, forming a segment of a circle. Upper part of the breast reddish-orange; lower part, belly, and vent white. Legs black, covered with round scales. Irides reddish-brown.

Female. PLATE 64*. The female bird has the head, and the fore part of the neck, of a deeper grey; and is without the moustaches and gular pouch. The back of the lower part of the neck reddish-orange. The other parts of her plumage are similar to the male. Is seldom more than one-third of the size of the other sex.

Young. The young, at a month old, are covered with a buff-coloured down, barred upon the back, wings, and sides, with black.

LITTLE BUSTARD.

OTIS TETRAX, Linn.

PLATE LXV.

- Otis tetrax, *Linn.* Syst. 1. p. 264. 3.—Faun. Suec. No. 196.—*Gmel.* Syst. 1. p. 723. sp. 3.—*Lath.* Ind. Ornith. v. 2. p. 659. sp. 3.
 Otis minor, *Raii* Syn. p. 59. 2.—*Will.* p. 129. t. 32.—*Briss.* v. 2. p. 24. 2. t. 2. f. 1. 2.
 La Petite Outarde ou Cannepeière, *Buff.* Ois. v. 2. p. 40.—*Id.* Pl. Enl. 25. old male, and pl. 10. female.
 Outarde Cannepeière, *Temm.* Man. d'Ornith. v. 2. p. 507.
 Der Kleine Trappe, *Bechst.* Naturg. Deut. v. 3. p. 1446. t. 45. female.—*Meyer,* Tasschenb. v. 1. p. 309.
 Little Bustard, Br. Zool. I. No. 99.—Arct. Zool. 2. p. 321. A.—*Lath.* Syn. 4. p. 799. 2.—*Lewin's Br. Birds.* 4. t. 40.—*Walc.* Syn. 2. t. 174. Mont. Ornith. Dict.—*Id.* Supp.—*Bewick's Br. Birds.* 1. t. p. 330. female.

THIS is a bird of a very handsome plumage, and must be occasional visitant. considered one of our rarest visitants. Recurring only to the product of later years, two specimens are mentioned by BEWICK, as having fallen under his inspection, one of which, now in the collection of JOHN TREVELYAN, Esq. of Wallington, was taken alive upon Newmarket Heath, and survived for a very few weeks in confinement. MONTAGU alludes to three or four instances of its capture; and I am enabled to add two more, of individuals that were killed in Northumberland. One of these, in the possession of his Grace the Duke of NORTHUMBERLAND, and from the tints of its plumage, apparently a female, was shot near Warkworth, in the autumn of 1821; the other was killed on the 1st of February 1823, near Twizell, and is placed in my collection. This bird, although destitute of the peculiar markings about the head and neck that distinguish the male in his adult state, or rather perhaps at a particular season, proved, however, to be of that sex, by the unerring test of dissection. This fact, corroborated by the case mentioned in the Supplement to Dr LATHAM's General Synopsis, of a bird of this species, killed

in Sussex, having the apparent plumage of the female, but also, on dissection, proving otherwise, has led me to doubt the assertion of various writers, that all the individuals killed in Britain had been of the female sex; and I can only account for the assertion, by concluding it to have arisen from the contrast observable between these specimens and the male, as seen in his summer attire, without the more certain criterion above mentioned having been attempted.

Whether this feminine plumage is confined to young birds, or is the proper garb of the males of all ages during the winter, I am sorry that I cannot, from my own experience, determine, but I feel inclined to lean to the latter opinion *, and which is considerably strengthened by the information I have received from Captain ROBERT MITFORD, R. N., who, during a long station in the Mediterranean, had opportunities of examining the Little Bustard at all seasons of the year, and who does not recollect having killed any in the winter with a black neck, and other distinguishing marks which a male invariably possesses during the summer or pairing season †.

Food.

This species is graminivorous, and its digestive organ is membranaceous and very large. In the specimen I have before alluded to, it was distended with a mass of various grasses and the stems of clover, intermixed with the seeds of cow-parsnip (*Heracleum sphondylium*), and of other umbelliferous plants. No gravel, or other hard substance, generally used by birds possessing strong muscular stomachs or gizzards, was contained in it; from which it appears that MONTAGU's views are correct ‡, and that the gastric juice alone is

* I have since ascertained that the male Little Bustard undergoes a change of plumage every spring, when he assumes the black neck and collar (as afterwards described). His *winter plumage* resembles that of the female bird.

† TEMMINCK, in his remarks on the Bustard Genus, intimates his suspicion, that the males in winter may resemble the other sex in plumage.

‡ See Supplement to Ornith. Dict. article *Little Bustard*.

sufficiently powerful, without attrition, to effect the complete dissolution of the food in many herbivorous or granivorous birds. The Little Bustard will also feed eagerly upon grain, and it is said to devour worms and insects.

It lays its egg upon the bare ground under the cover of the herbage, or low plants, such as the cistus, &c. growing upon the plains it usually frequents. The eggs are from three to five in number, and of a clear shining grass-green colour, without spot or stain.

Eggs.

When suddenly disturbed, this bird immediately takes wing, flying with considerable strength and velocity, from fifty to a hundred yards, raised but little above the surface of the ground ; and, upon alighting, runs off with great swiftness, by this mode generally eluding the pursuit.

It is a common inhabitant of the champaign and arid parts of Spain, Italy, and Turkey ; is tolerably abundant in the south of France, and very numerous on the coasts of Barbary. In Switzerland and Germany it is a rare bird.—Its flesh is excellent, and surpasses in flavour that of our most esteemed gallinaceous game.

PLATE 66. A male bird, in the young or winter plumage, and of the natural size.

Length, when extended, one foot five inches and a half.

General
descrip-
tion.

Breadth, along the extended wings, two feet ten inches and a half.

Bill blackish-brown ; the upper mandible emarginated. Irides saffron-yellow. Crown of the head and occiput cream-yellow, speckled and spotted with black. Chin and throat white. Neck cream-yellow ; the centres of the feathers, and a cross bar in them, black. Hind part of the neck destitute of feathers, and covered with grey down. The whole of the upper parts scapulars, and lesser wing-coverts, beautifully barred and mottled with buff-orange, cream-yellow, and black.

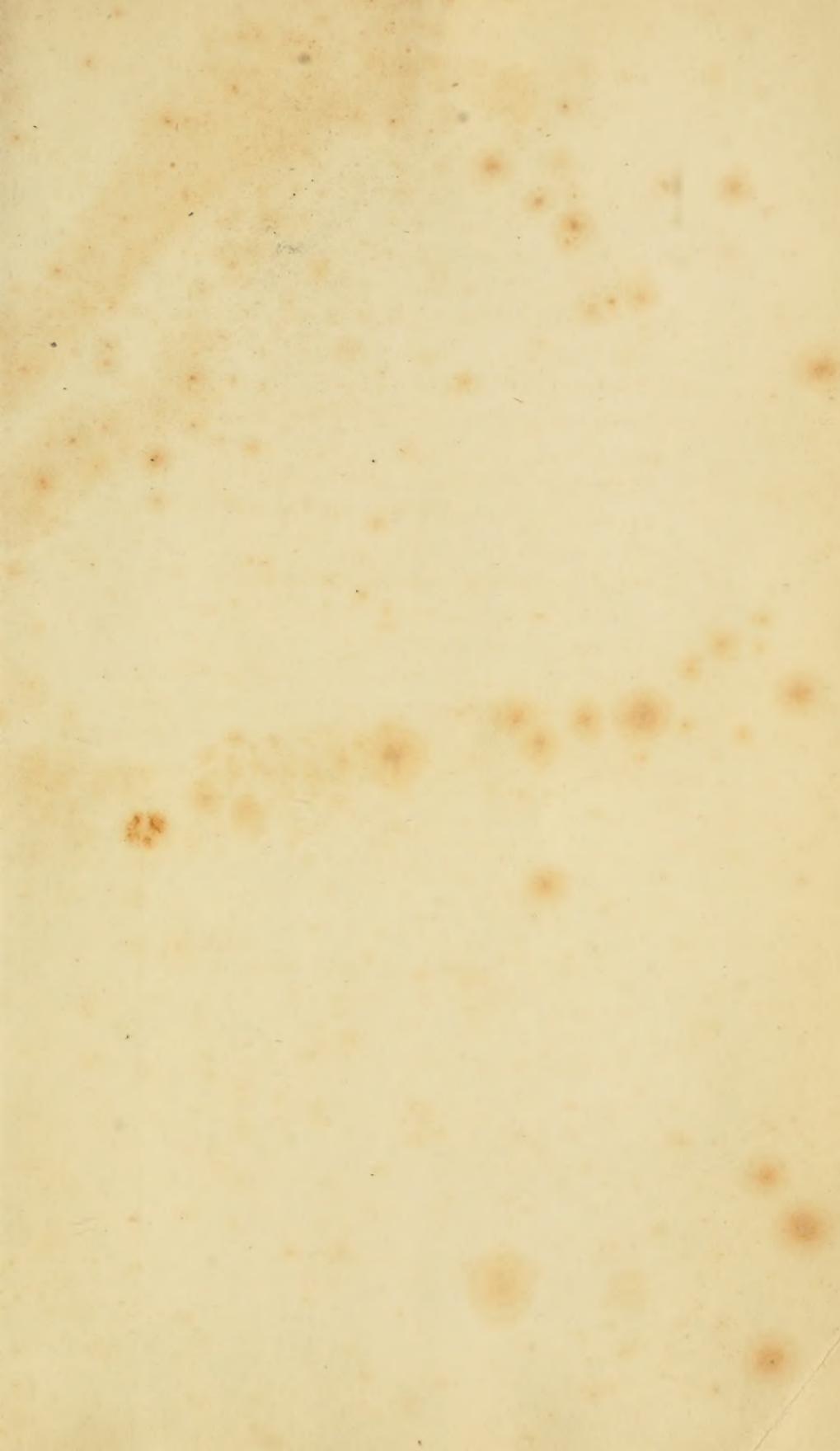
Greater wing-coverts white, with two black bars. First four quills half white, half black ; fifth entirely white,

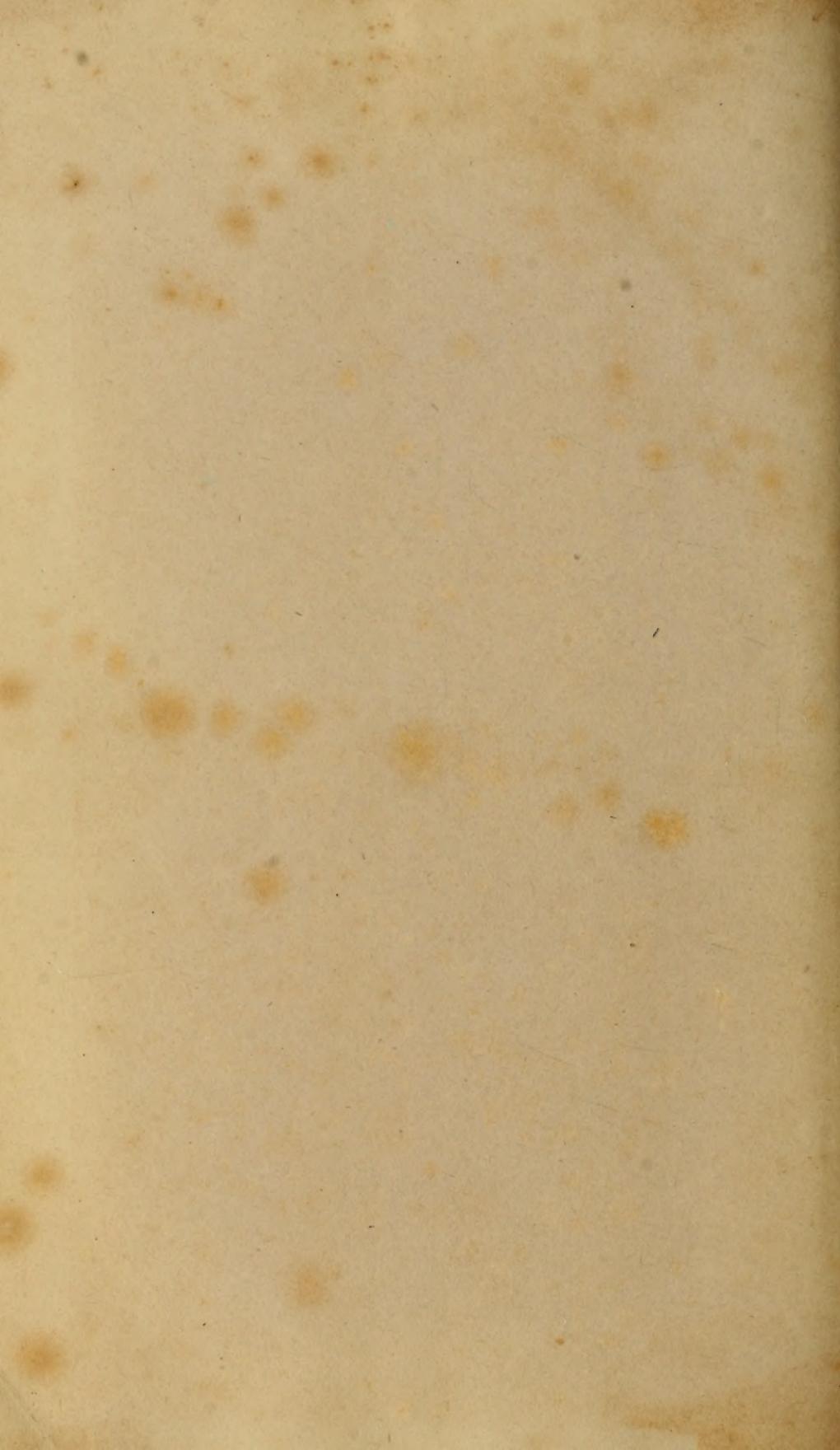
except the tip, which is spotted with black; the next four white, with one black bar near the tips; those next to the body long, white, with three black bars. Breast and sides white, transversely barred with black. Middle of the belly, thighs, and vent, white. The roots or downy bases of the feathers of the under parts are flesh-red. Tail of eighteen feathers; the four middle ones cream-yellow, with four black bars; the rest white, barred and spotted with black. Legs yellowish-grey, reticulated; toes short. First quill-feather about half an inch shorter than the second and third, which are of equal length.

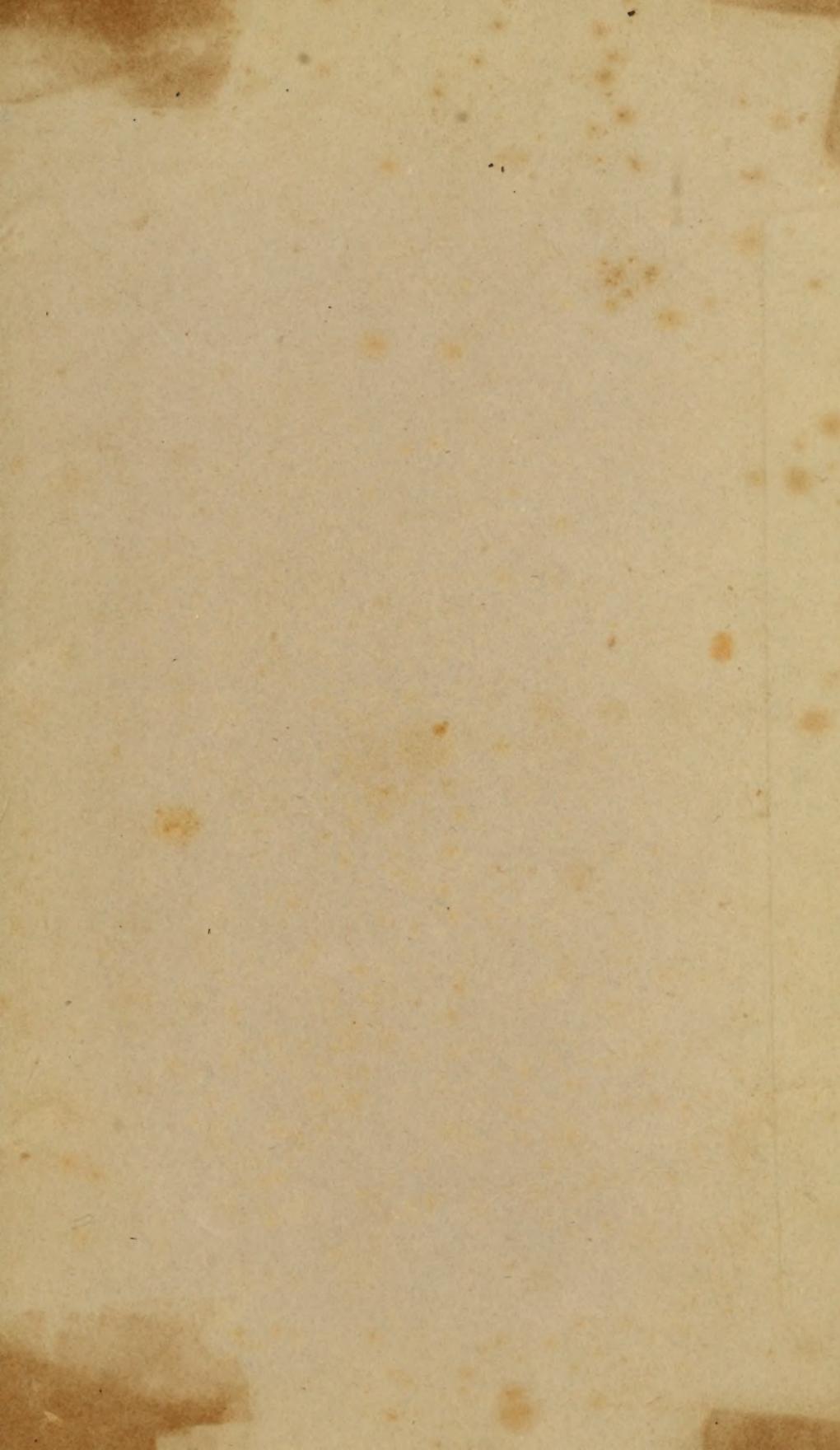
The female resembles the male in the above state, except that the black spots and bars upon the upper parts of the body are not so intense.

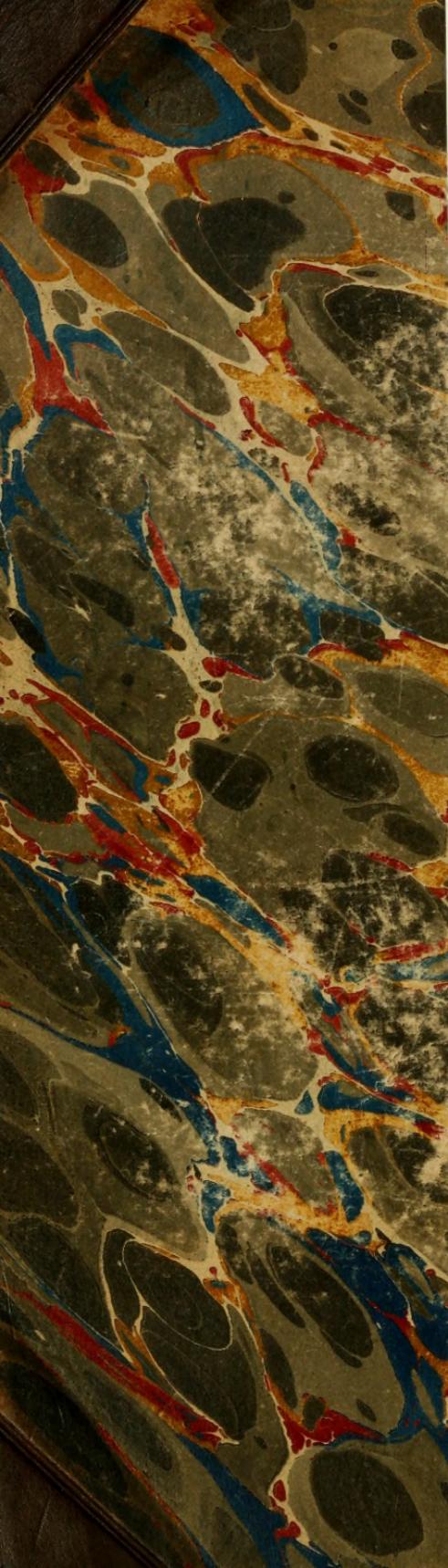
The male, in the adult state, or perhaps during the pairing-season only, has a white collar upon the upper and lower region of the throat, and the intermediate part black. In other respects as in the winter plumage.

END OF THE FIRST VOLUME.









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